aiwa

COMPACT DISC STEREO SYSTEM

# Z-VR80/88

## OPERATING INSTRUCTIONS

En (English)

8-MAN-906-01
80320AMY-Y-9

EZ

R·D·S EON

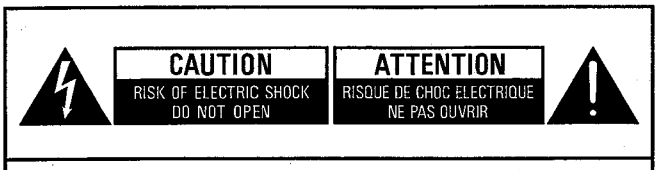
COMPACT disc DIGITAL AUDIO

Printed by: Schaltungsdienst Lange Berlin (Germany)

# ENGLISH

## WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



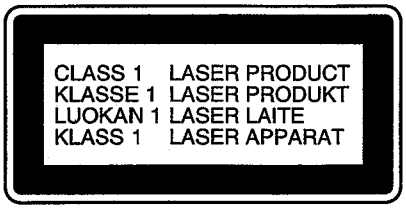

**CAUTION**

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

## CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This compact disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the exterior.




## CAUTION!

Invisible laser radiation when open and inter locks defeated. Avoid exposure to beam.

**ADVARSEL!**
Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude al funktion. Undgå udsættelse for stråling.

**VAROITUS!**
Laitteen käyttäminen muulla kuin tässä käyttöohjeessaa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteiylle.

**VARNING!**
Om apparaten används på annat sätt än i denna bruksanvisning specificerats, kan användaren utsätta för osnylig laser-strålning, som överskrider gränsen för laserklass 1.

# PRECAUTIONS

Read the Operating Instructions carefully and completely before operating the unit. Be sure to keep the Operating Instructions for future reference. All warnings and cautions in the Operating Instructions and on the unit should be strictly followed, as well as the safety suggestions below.

**Installation**

1 **Water and moisture** — Do not use this unit near water, such as near a bath, sink, swimming pool, or the like.
2 **Heat** — Do not use this unit near sources of heat, including heating vents, stoves, or other appliances that generate heat. It also should not be placed in temperatures less than 5°C (41°F) or greater than 35°C (95°F).
3 **Mounting surface** — Place the unit on a flat, even surface.
4 **Ventilation** — The unit should be situated with adequate space around it so that proper heat ventilation is assured. Allow 10 cm clearance from the rear and the top of the unit, and 5 cm from the each side.
- Do not place the unit on a bed, rug, or similar surface that may block the ventilation openings.
- Do not install the unit in a bookcase, cabinet, or airtight rack where ventilation may be impeded.

5 **Objects and liquid entry** — Take care that objects or liquid do not get inside the unit through the ventilation openings.
6 **Carts and stands** — When placed or mounted on a stand or cart, the unit should be moved with care.
Quick stops, excessive force, and uneven surfaces may cause the unit or cart to overturn or fall.
7 **Condensation** — Moisture may form on the CD pickup lens when:
- The unit is moved from a cold spot to a warm spot
- The heating system has just been turned on
- The unit is used in a very humid room
- The unit is cooled by an air conditioner

When this unit has condensation inside, it may not function normally. Should this occur, leave the unit for a few hours, then try to operate again.
8 **Wall or ceiling mounting** — The unit should not be mounted on a wall or ceiling, unless specified in the Operating Instructions.

**Electric Power**

1 **Power sources** — Connect this unit only to power sources specified in the Operating Instructions, and as marked on the unit.

2 **AC power cord**
- When disconnecting the AC power cord, pull it out by the AC power plug. Do not pull the cord itself.
- Never handle the AC power plug with wet hands, as this could result in fire or shock.
- Power cords should be firmly secured to avoid being severely bent, pinched, or walked upon. Pay particular attention to the cord from the unit to the power socket.
- Avoid overloading AC power plugs and extension cords beyond their capacity, as this could result in fire or shock.

3 **When not in use** — Unplug the AC power plug from the AC power socket if the unit will not be used for several months or more. When the cord is plugged in, a small amount of current continues to flow to the unit, even when the power is turned off.

**Maintenance**

Clean the unit only as recommended in the Operating Instructions.

**Damage Requiring Service**

Have the units serviced by a qualified service technician if:
- The AC power cord or plug has been damaged
- Foreign objects or liquid have got inside the unit
- The unit has been exposed to rain or water
- The unit does not seem to operate normally
- The unit exhibits a marked change in performance
- The unit has been dropped, or the cabinet has been damaged

DO NOT ATTEMPT TO SERVICE THE UNIT YOURSELF.

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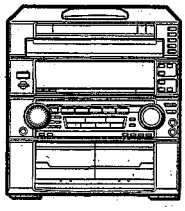
En

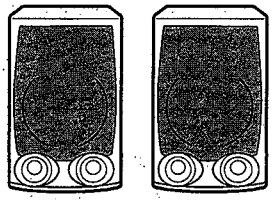
# SETTING UP

The DOLBY PRO LOGIC system which is the biggest feature of this stereo system provides you with multichannel sound in your home.
Complete setting and connection of the main unit, supplied speakers, your TV and video equipment according to the following procedure.

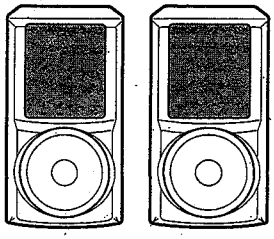
### Check your system and accessories



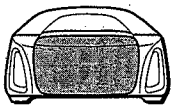
CX-ZVR80/88 Compact disc stereo cassette receiver



SX-ZR80 Front speakers
(For Z-VR80)

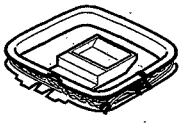


SX-WZR88 Front speakers
(For Z-VR88)

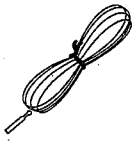


SX-CR676
Centre speaker and Surround speakers

Remote control



MW/LW antenna

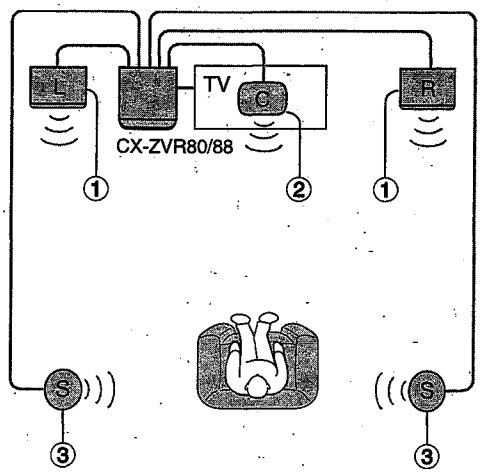


FM antenna

Operating Instructions, etc.

## POSITIONING THE SPEAKERS

To achieve the optimum effects obtainable with the DOLBY PRO LOGIC system, it is important to position the speakers properly. Refer to the following illustration to find out the best location in your room.




**① Front speakers**
**② Centre speaker**
Position in the centre of the two front speakers. In addition, position on or below the TV set, if connecting a TV set to the unit.
**③ Surround speakers**
Place the surround speakers directly to the side of or slightly behind the listening area. Align them horizontally, about 1 metre above ear height.

**NOTE**

- No sound is heard from the centre and the surround speakers when the DOLBY PRO LOGIC, the DSP SURROUND system and the 5.1CH (page 32) are set to off.
- The sound is heard from the centre speaker when the DOLBY PRO LOGIC or the 5.1CH (page 32) is set to on.

## CONNECTIONS

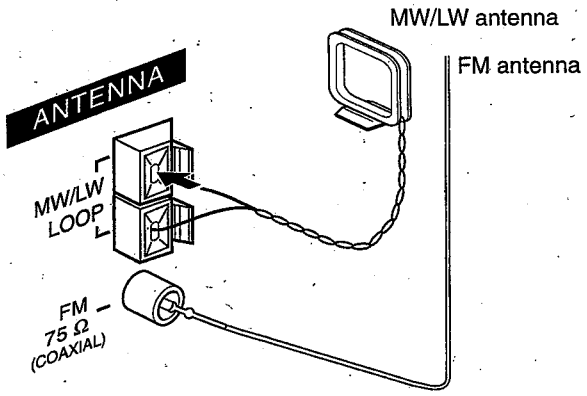
**IMPORTANT**
Connect the speakers, antennas, and all optional equipment first. Then connect the AC cord at the end.

### Speakers
There are no differences between the front speakers. Likewise, there are no differences between the souround speakers. Both speakers can be connected as L (left) or R (right).

### Before connecting the AC cord
The rated voltage of your unit shown on the rear panel is 230 V AC. Check that the rated voltage matches your local voltage.

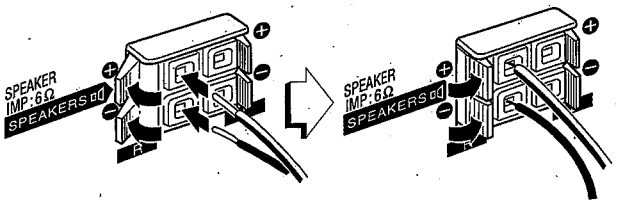
### 1 Connect the supplied antennas.

Connect the FM antenna to **FM 75 Ω** terminals and the MW/LW antenna to **MW/LW LOOP** terminals.




### 2 Connect the front speakers to the main unit.

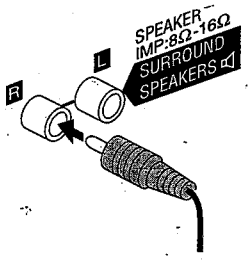
Connect the right speaker cord to **SPEAKERS R** terminals, and the left to **SPEAKERS L** terminals.




The speaker cord with the white stripe should be connected to ⊕ terminal and the black cord to ⊖ terminal.

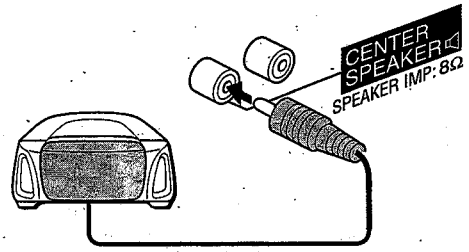
### 3 Connect the surround speakers to the main unit.

Connect the right surround speaker cord to **SURROUND SPEAKERS R** terminal, and left to **SURROUND SPEAKERS L** terminal.




### 4 Connect the centre speaker.

Connect the centre speaker cord to **CENTER SPEAKER** terminal.




### 5 Connect the video equipment.

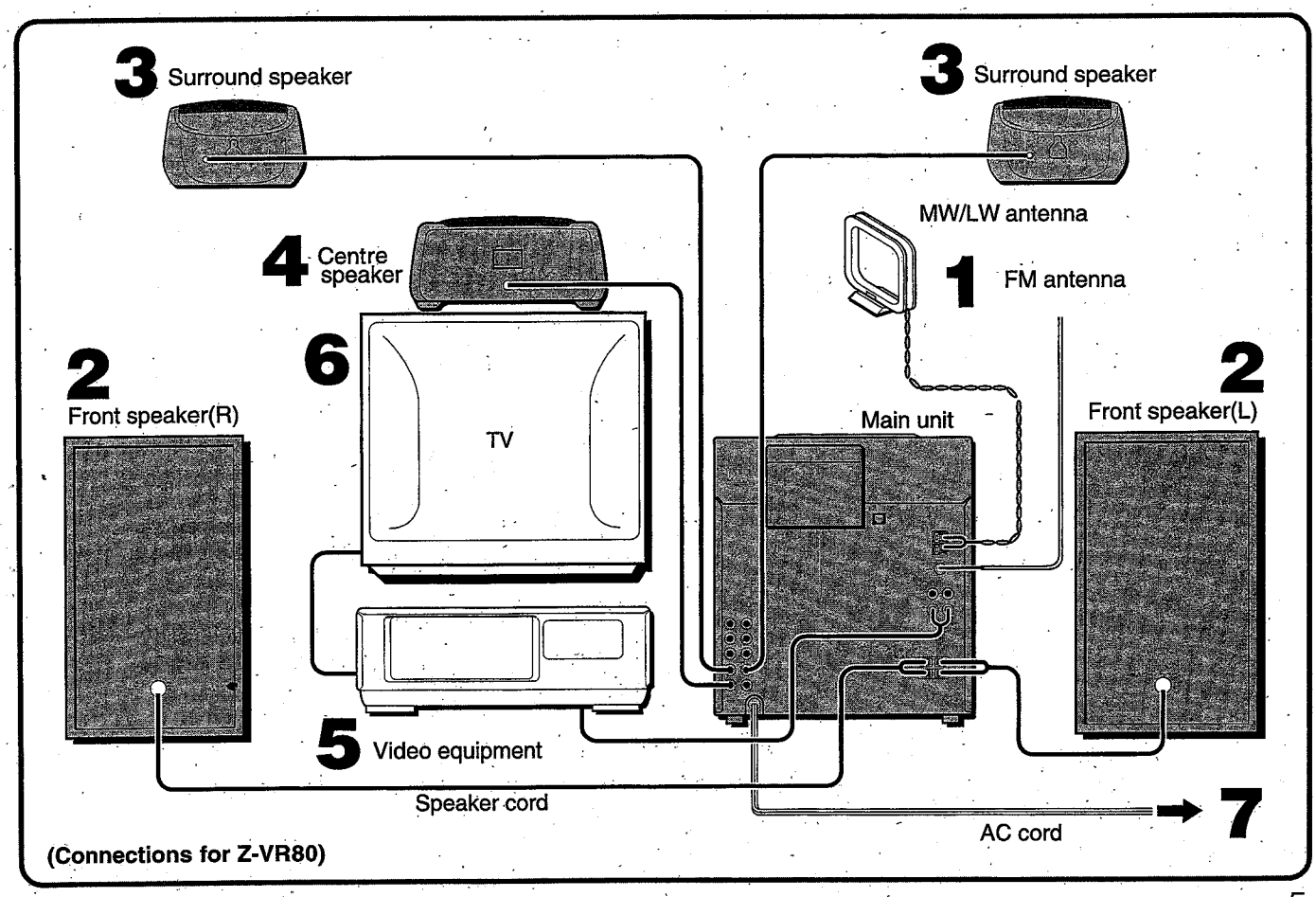
Connect **VIDEO/AUX IN** jacks of this unit to the audio output jack of the video equipment with an optional audio connecting cord.

### 6 Connect a TV to the video equipment.

Refer to the Operating Instructions of the connected equipment for details.

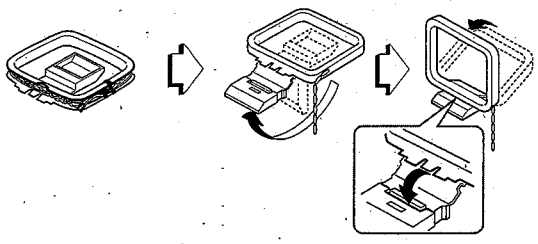
### 7 Connect the AC cord to an AC power socket.






**(Connections for Z-VR80)**

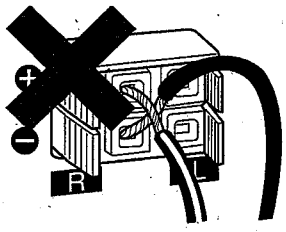
**To stand the MW/LW antenna on a surface**
Fix the claw to the slot.



**To position the antennas**
**FM unipolar antenna:**
Extend fully and position for the best possible reception.
The use of an outdoor antenna is recommended for better reception.
**MW/LW loop antenna:**
Position to find the best reception.

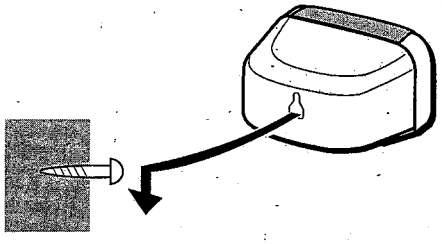
**NOTE**

- Be sure to connect the speaker cords correctly. Improper connections can cause short circuits in **SPEAKERS** terminals.



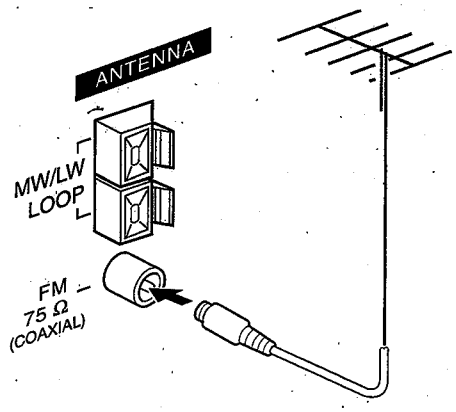

- Do not leave objects generating magnetism, such as credit cards, near the speakers, as the objects may be damaged.
- Do not position the FM antenna near metal objects or curtain rails.
- Do not position the MW/LW antenna near other optional equipment, the stereo system itself, the AC cord or speaker cords, as interference will occur.
- Do not unwind the MW/LW antenna wire.

**To mount the surround speakers on the wall**
Carefully mount the surround speakers so that the speakers are firmly secured.



## CONNECTING AN OUTDOOR ANTENNA

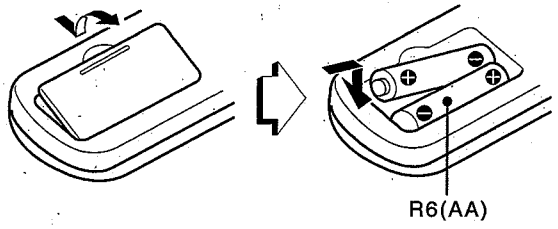
For better FM reception, use of an outdoor antenna is recommended.
Connect the outdoor antenna to **FM 75 Ω** terminals.




**To connect other optional equipment → page 31.**

# REMOTE CONTROL

**Inserting batteries**
Detach the battery cover on the rear of the remote control and insert two R6 (size AA) batteries.

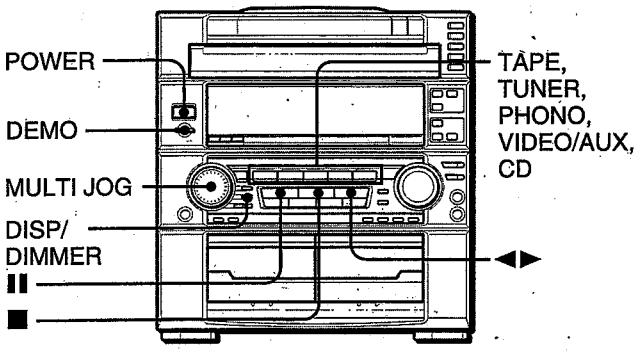



**When to replace the batteries**
The maximum operational distance between the remote control and the sensor on the main unit should be approximately 5 metres (16 feet). When this distance decreases, replace the batteries with new ones.

**NOTE**

- If the remote control is not going to be used for an extended period of time, remove the batteries to prevent possible electrolyte leakage.
- The remote control may not operate correctly when:
  - The line of sight between the remote control and the remote sensor inside the display window is exposed to intense light, such as direct sunlight
  - Other remote controls are used nearby (those of a television, etc.)

# BEFORE OPERATION




### To turn the power on

Press one of the function buttons (**TAPE**, **TUNER**, **PHONO**, **VIDEO/AUX** or **CD**).
Playback of the inserted disc or tape begins, or the previously tuned station is received (Direct Play Function).
**POWER** is also available.
The disc compartment may open and close to reset the unit.

### To turn the power off

Press **POWER**.

### Illumination guides

Whenever the AC cord is connected or one of the function buttons is pressed, the buttons for that operation light up or flash.

### Flash windows

The windows on the top of the unit and the cassette decks light up or flash while the unit's power is on.
To turn off the light of the top window, press ■**CLEAR** while pressing **CD**. To turn back on, repeat the above.
To turn off the light of the cassette decks, press ■**CLEAR** while pressing **TAPE**. To turn back on, repeat the above.

### Using the remote control

The instructions in this manual refer mainly to the buttons on the main unit. Buttons on the remote control with the same names as those on the main unit can be used as well.

### To change the spectrum analyzer display

3 patterns of spectrum analyzer display can be shown.
1 Press **DISP/DIMMER** once.
2 Within 4 seconds, turn **MULTI JOG** to select one of the spectrum analyzer displays.

### To dim the illumination of the display

1 Press **DISP/DIMMER** twice.
2 Within 4 seconds, turn **MULTI JOG** to select the dimmer mode.

DIMMER 0 ↔ DIMMER 1 ↔ DIMMER 2 ↔ DIMMER 3

**DIMMER 0:** The usual display.
**DIMMER 1:** The illumination of the display is dimmer than usual.
**DIMMER 2:** The illumination of the display is dimmer than DIMMER 1.
**DIMMER 3:** The illumination of the display is dimmer than DIMMER 2. The spectrum analyzer and the illumination on the buttons also light off.

**NOTE**

When DIMMER 3 is selected, the counter display flashes in pause mode, etc.

### Game Demo

When the AC cord is connected, the display window demonstrates the game Demo. When the power is turned on, the game Demo is overridden by the operation display. When the power is turned off, the game Demo is restored.

**To cancel the game Demo**
Press **DEMO**. To re-activate the game Demo, press **DEMO** again.

### To play the game Demo

1 Press **DEMO** so that the game Demo displays.
2 Press ◄►.
Three numbers on the display start to run.
3 Press ■ once.
The number on the left side stops.
4 Press ■ twice to stop the remaining two numbers.

*Scoring:*
20 points are given to start the game.
If all the numbers are equal, 50 points are added to the score.
If not equal, one point is subtracted.
If the gained points reach 9999, you win.
If the gained points fall to 0, you lose.

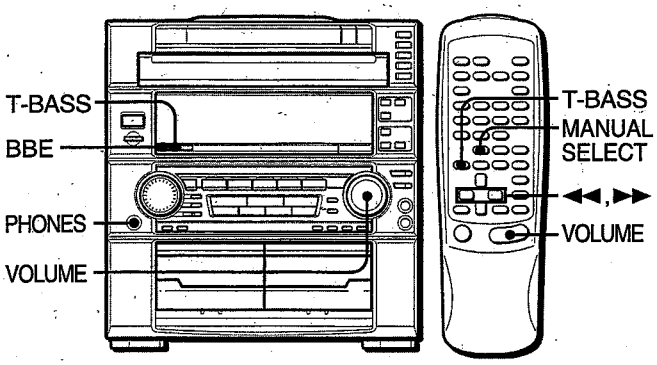
### To reset the game

Press **DEMO** twice, then press ◄►. The game starts again.

**NOTE**

- During playing the game Demo, ◄► and ■ are available only for the game Demo. Cancel the game Demo to use these buttons for other functions such as CD playing, etc.
- During the game Demo, some indicators unrelated with the actual operation light up on the display.

# AUDIO ADJUSTMENTS




## VOLUME CONTROL

**Turn VOLUME on the main unit, or press VOLUME on the remote control.**

The volume level is displayed as a number from 0 to MAX (50). The volume level is automatically set to 20 when the power is turned off with the volume level set to 21 or more.

**To change the left/right balance**

Press **MANUAL SELECT** on the remote control. L/R is displayed for 2 seconds. Press ◀◀ or ▶▶ on the remote control within these 2 seconds.

- The DOLBY PRO LOGIC (page 27) and the DOLBY DIGITAL SURROUND (page 32) front speakers level is also changed.

**Using the headphones**

Connect headphones to **PHONES** jack with a stereo standard plug (ø6.3 mm, 1/4 inch).

No sound is output from the speakers while the headphones are plugged in.

- When the headphones are plugged in, the DSP SURROUND system, the DOLBY PRO LOGIC and the 5.1CH (page 32) do not function.

**Sound adjustment during recording**

The output volume and tone (except BBE) of the speakers or headphones may be freely varied without affecting the recording.

**NOTE**

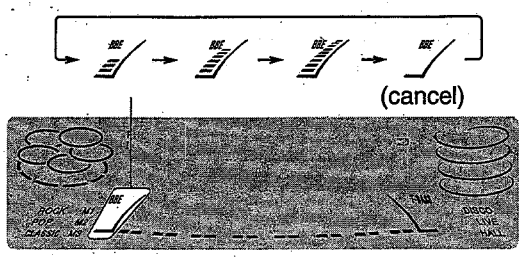
When playing back a tape recorded with BBE, it is recommended that BBE be set to off to avoid distorted high frequency sound.

## BBE SYSTEM

The BBE system enhances the clarity of high-frequency sound. It also enriches the Karaoke function to make your voice sound clear and pleasant.

**Press BBE.**

Each time it is pressed, the level changes. Select one of the three levels or the off position to suit your preference.




**NOTE**

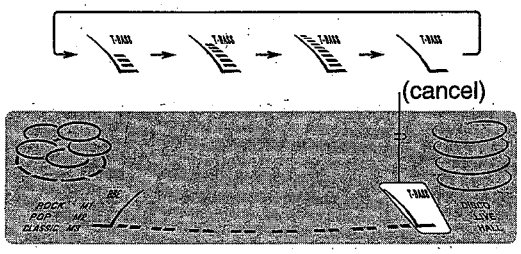
The BBE system does not perform while the 5.1CH (page 32) is selected.

## SUPER T-BASS SYSTEM

The T-BASS system enhances the realism of low-frequency sound.

**Press T-BASS.**

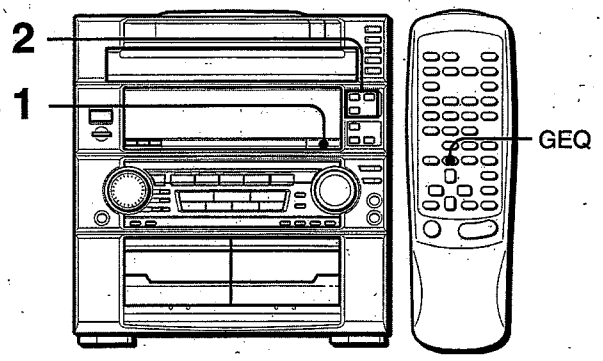
Each time it is pressed, the level changes. Select one of the three levels or the off position to suit your preference.




**NOTE**

Low-frequency sound may be distorted when the T-BASS system is used for a disc or tape in which low-frequency sound is already emphasized. In this case, cancel the T-BASS system.

# GRAPHIC EQUALIZER




## SELECTING THE PROGRAMMED EQUALIZATION CURVE

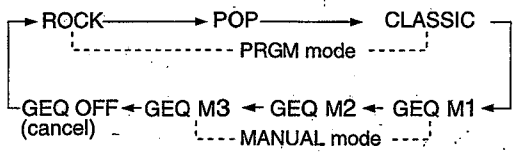
This unit provides the following 3 different equalization curves.
**ROCK:** Powerful sound emphasizing treble and bass
**POP:** More presence in the vocals and midrange
**CLASSIC:** Enriched sound with heavy bass and fine treble

*1* **Press GEQ PRGM/MANU to select PRGM (program) mode.**
The PRGM indicator turns on.

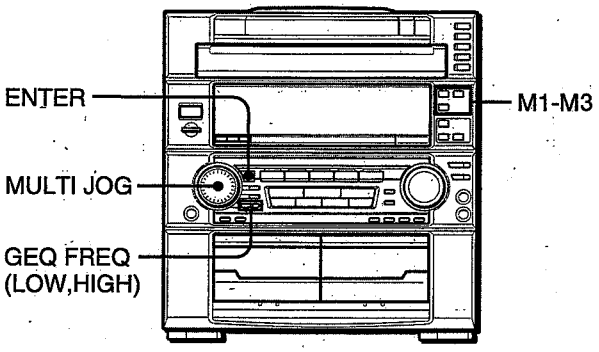
*2* **Press one of the graphic equalizer preset buttons.**
The selected program mode indicator flashes and that program mode appears on the display.

**To cancel the selected mode**
Press the selected graphic equalizer preset button. "GEQ OFF" is displayed and the equalization curve becomes flat.

**To select with the remote control**
Press **GEQ** repeatedly until the desired program mode is displayed.



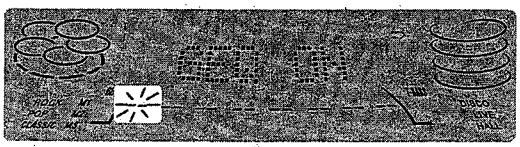

## SETTING A NEW EQUALIZATION CURVE MANUALLY




The equalization curve can be customized to suit your preference.

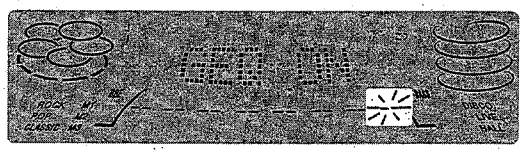
*1* **Press GEQ FREQ (LOW).**
The lowest level frequency indicator flashes for 8 seconds.

*2* **Within 8 seconds, turn MULTI JOG to adjust the level of the lowest frequency.**



*3* **Press GEQ FREQ (HIGH).**
The highest level frequency indicator flashes for 8 seconds.

*4* **Within 8 seconds, turn MULTI JOG to adjust the level of the highest frequency.**



The frequency level indicators between the lowest and the highest are adjusted accordingly.

SOUND

En

## MEMORIZING THE NEW EQUALIZATION CURVES

Up to 3 customized equalization curves can be stored on the MANUAL mode M1-M3.

***1*** **Set a new equalization curve with GEQ FREQ and MULTI JOG.**
See "SETTING A NEW EQUALIZATION CURVE MANUALLY" on page 9.
The created equalization curve is displayed for 8 seconds.

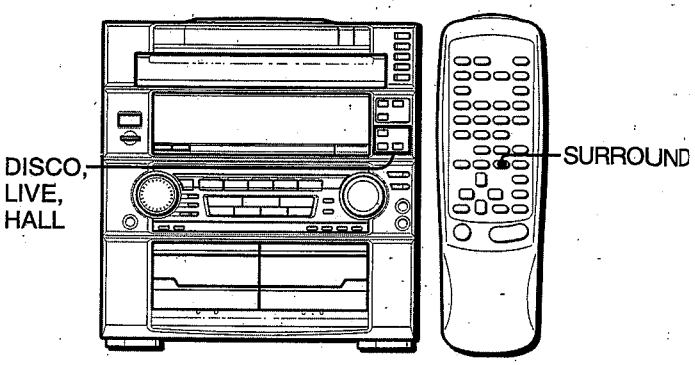
***2*** **Within 8 seconds, press ENTER.**
"MEMORY" is displayed and all the manual mode indicators flash for 8 seconds. Go to step 3 within those 8 seconds.
- If this step is not completed within 8 seconds, press **GEQ FREQ** first to display "GEQ ON". Then press **ENTER** within 8 seconds.

***3*** **While the manual mode indicators are flashing, press one of the graphic equalizer preset buttons M1-M3.**
The equalization curve is stored.

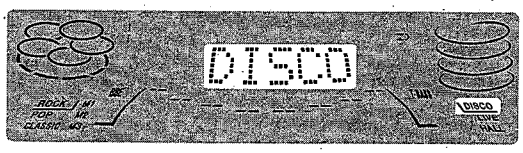
**To select the stored equalization curve**
1 Press **GEQ PRGM/MANU** to select the MANUAL mode. The MANUAL indicator turns on.
2 Press one of the graphic equalizer preset buttons **M1–M3**.

# DSP SURROUND

The DSP (Digital Signal Processor) SURROUND system can create the effect of sound reflected from walls and ceilings. This system enhances 3 types of sound presence.
**DISCO**: Sound presence of a disco
**LIVE**: Sound presence of a live music performance
**HALL**: Sound presence of a concert hall




**Press one of the DSP SURROUND mode buttons.**




Equalization curves are selected automatically to match the DSP SURROUND modes and can also be selected or turned off to suit your preference.

**When the music source is monaural**
Select LIVE to obtain a simulated stereo effect. When DISCO or HALL is selected, no sound will be heard from the surround speakers.

**To cancel the selected mode**
Press the selected DSP SURROUND mode button again. "DSP OFF" is displayed.

**To select with the remote control**
Press **SURROUND** repeatedly until the desired mode is displayed.

**To adjust the volume of the surround speakers**
Press **MANUAL SELECT** twice or three time on the remote control. "S-L" or "S-R" is displayed for 2 seconds. Press ◀◀ or ▶▶ on the remote control within these 2 seconds.
- The DOLBY PRO LOGIC (page 27) and the DOLBY DIGITAL SURROUND (page 32) surround speakers level is also changed.

**NOTE**
The DSP SURROUND mode is cancelled when:
- the ECHO level is changed.
- the DOLBY PRO LOGIC is turned on.
- the headphones are plugged in.
- the 5.1CH (page 32) is selected.

# PRESETTING STATIONS

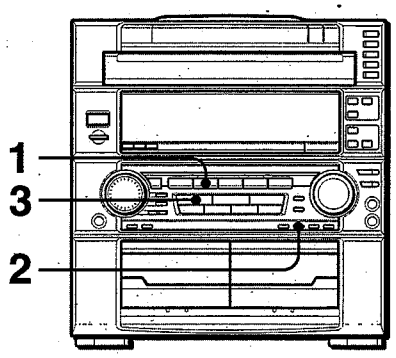
The unit can store a total of 32 preset stations. Presetting allows you to tune in to a station directly. Stations are assigned preset numbers, beginning from 1 in consecutive order for each band (FM, MW, LW).

When **TUNER/BAND** is pressed while the power is off, the power is turned on directly.

**Automatic presetting:**
This unit has a function for reception of *1RDS (Radio Data System) and other stations.
FM RDS stations take priority over other FM stations if there are more than 32 receivable stations.
**Manual presetting:**
You can select stations to be preset from all the bands.

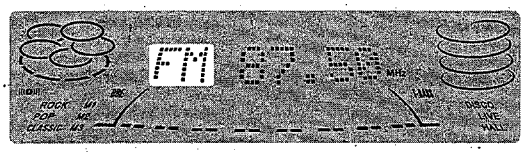
## AUTOMATIC PRESETTING

The tuner scans through the receivable frequency range and stores stations automatically.




### *1* Press TUNER/BAND.

"FM" is displayed.

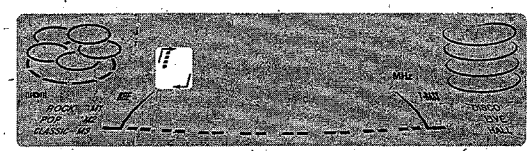



### *2* Keep RT pressed for 4 seconds until AUTO PRESET is displayed.

**▮▮SET** flashes for 4 seconds.

### *3* Press ▮▮SET while it flashes.

The tuner searches for a station, beginning with the FM band. When a tuned station is stored, the selected preset number flashes on the display.



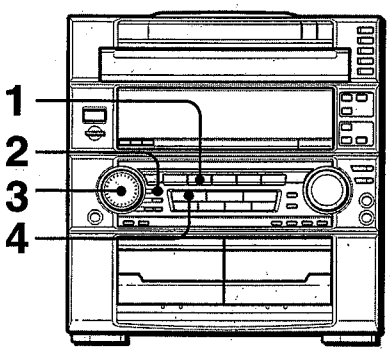
The search continues on the MW and LW bands if preset numbers are still available.
When automatic presetting has been completed, the display returns to the first preset station.

**When the tuner detects *2identical RDS stations with alternative frequencies**
Only the station with the stronger signal is stored.
Before storing an RDS station, the tuner checks first whether the same stations on the other frequencies are present, and stores the station with the best reception.

**NOTE**

When automatic presetting is done, all previously stored stations are cleared.

## MANUAL PRESETTING




### *1* Press TUNER/BAND repeatedly to select the band.

When **TUNER/BAND** is pressed while the power is off, the power is turned on directly (Direct Play Function).

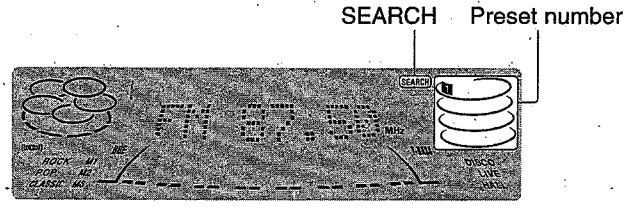
FM → MW → LW

### *2* Press TUNER PRESET/FREQ repeatedly to select the manual tuning mode.

Each time the button is pressed, the following three tuning modes are selected cyclically.
① **Preset tuning mode:** The preset number flashes.
② **Auto search mode:** "SEARCH" is displayed.
③ **Manual tuning mode:** "SEARCH" is not displayed and the preset number does not flash.

**NOTE**

The preset tuning mode is skipped if no station is preset.

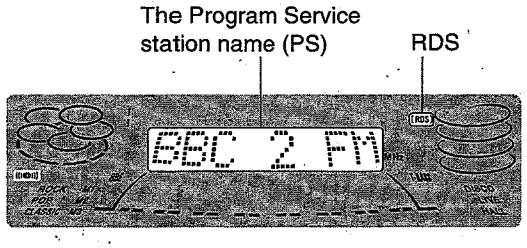



### *3* Turn MULTI JOG clockwise or anti-clockwise to tune in to a station.

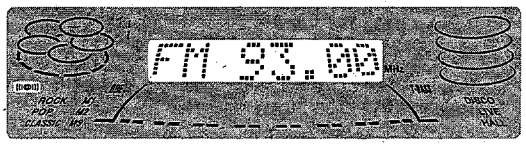
The frequency changes as you turn the dial. When a station is received, "TUNE" is displayed for 2 seconds.

*To be continued*

ⓐ When tuning in to an FM RDS station
After TUNE on the display goes out, the Program Service station name ("PS) is displayed and RDS lights up.




ⓑ When tuning in to the other stations
After TUNE on the display goes out, the band is displayed.

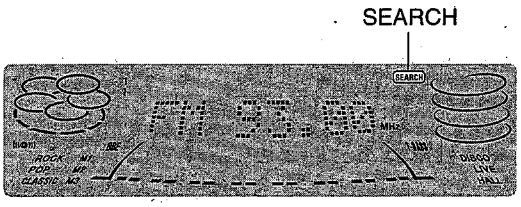



- During FM stereo reception, ((◉)) lights.
- **I◀◀DOWN** or **UP▶▶I** are also available to tune in to a station.

### *4* Press ▮▮SET to store the station.
The selected preset number flashes.

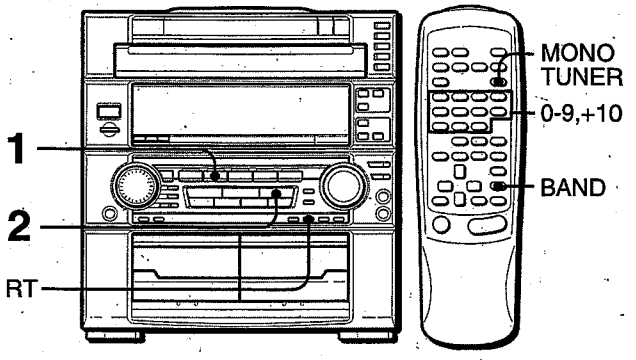
### *5* Repeat steps 1 to 4 to store the stations.
The next station will not be stored if a total of 32 preset stations for all the bands have already been stored.

**To search for a station quickly (Auto Search)**
Press **TUNER PRESET/FREQ** repeatedly to display "SEARCH" (auto search mode), and turn **MULTI JOG** clockwise or anti-clockwise until the tuner starts searching for a station. After tuning in to a station, the search stops.




To stop the Auto Search manually, turn **MULTI JOG** a little in either direction.
- The Auto Search may not stop at the stations with very weak signals.
- **I◀◀DOWN** and **UP▶▶I** are also available to search for a station. Keep the button pressed until the tuner starts searching. Press the button to stop the search manually.

# RECEPTION BY PRESET NUMBER




### *1* Press TUNER/BAND to select a band.

### *2* Press ◀▶PRESET repeatedly.
Each time the button is pressed, the next highest number is selected.

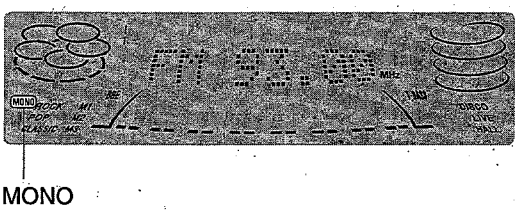
**Selecting a preset number on the remote control**
Press **BAND** to select a band. Then, press the numbered buttons to select a preset number.
*Example:*
To select preset number 20, press **+10**, **+10** and **0**.
To select preset number 15, press **+10** and **5** .

**To clear a preset station**
Select the preset number of the station to be cleared. Then, press **■CLEAR**, and press **▮▮SET** within 4 seconds.
The preset numbers of all stations in the band with higher numbers are also decreased by one.

**To tune in to a station which is not preset**
Press **TUNER/BAND** to select a band, and press **I◀◀DOWN** or **UP▶▶I** to select the station.

**To play a tuned station when the power is off (Direct Play Function)**
Press **TUNER/BAND**. The power is turned on and the tuned station is played.

**When an FM stereo broadcast contains noise**
Press **MONO TUNER** on the remote control to display "MONO".



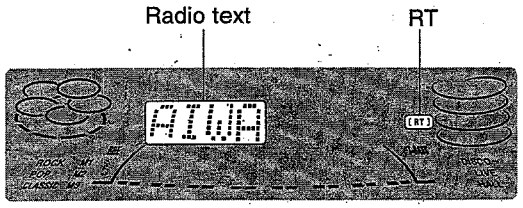

Noise is reduced, although reception is monaural.
To restore stereo reception, press the button so that the "MONO" indicator goes out.

**NOTE**
RDS functions may not work correctly if the RDS transmission data from the station contains too much interference or the reception signal is too weak.

**To display radio text (*4RT) during RDS reception**

When the tuned station is transmitting RT codes, "RT" lights up. At this time, press **RT**. "RT" flashes and text appears on the display.

To return to the normal display, press **RT** again.




If the tuned station is not transmitting RT codes, "RT" is not displayed. In this case, "NO RT" is displayed when you press **RT**.

***1 RDS**

Today many stations transmit so-called RDS (Radio Data System) codes that contain a variety of additional information along with regular sound signals.

***2 Identical RDS stations with alternative frequencies (AF)**

This is a list of alternative frequencies that gives information on the various transmitters broadcasting the same program in the same reception area. It enables receivers equipped with memory to store the list, to reduce the time needed for switching to another transmitter.

***3 Program service station name (PS)**

This is a name consisting of not more than 8 alphanumeric characters, which is displayed in order to inform listeners of program services being broadcast by the radio station. Example: BBC 1

**Characters which can be displayed**

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9 " ' – = @ [ ] + ✳ , < > . / ? _

If a character transmitted by the broadcast is not applicable to receivers, a blank space is inserted.

***4 Radiotext (RT)**

Information such as the cast list of a play or the title of a song is shown on the display.

***5 Program type identification (PTY)**

PTY allows selection of listening by one of 15 or more program types rather than by a station.

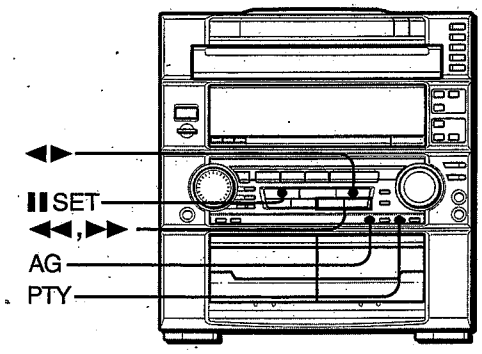
***6 Enhanced other networks information (EON)**

EON information gives the receiver a cross reference to other stations and allows the receiver to switch from the currently tuned station to another RDS station.

# SEARCHING WITH THE HELP OF RDS CODES

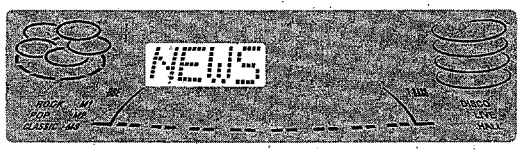


Each RDS station identifies the type of program (*5PTY) which it is currently broadcasting. If you specify a PTY, the unit can automatically detect a suitable station from the preset stations. In addition, the *6EON (Enhanced Other Networks) service works in some areas, so that searching is much faster.




## TO DISPLAY THE PTY

**Press PTY once during RDS reception.**




**Programs are classified as follows:**

**TRAFFIC, NEWS, AFFAIRS (current affairs), INFO (information), SPORT, EDUCATE (education), DRAMA, CULTURE, SCIENCE, VARIED, POP M (pop music), ROCK M (rock music), M.O.R.M (middle of the road music), LIGHT M (light classical), CLASSICS (serious classical), OTHER M (other music), WEATHER, FINANCE, CHILDREN (children's programs), SOCIAL A (social affairs), RELIGION, PHONE IN, TRAVEL, HOBBIES, JAZZ, COUNTRY, NATION M (national music), OLDIES, FOLK M (folk music), DOCUMENT, TEST (alarm test), ALARM!**

**NOTE**

- If program type information is not being transmitted, "NO PTY" is displayed.
- If undefined program type information is being transmitted, "UNDEFINE" is displayed.
- The unit identifies TRAFFIC with one of the program types.

En

## TO SEARCH FOR A SPECIFIED PTY

**1 Press PTY.**
The program type of the currently tuned station is displayed.

**2 Within 4 seconds, press ◀◀ or ▶▶ to select a program type.**

**3 Within 4 seconds, press PTY again.**
The search automatically checks every preset station. After identifying a suitable station, the station will be selected.

**EON service for the PTY search**
When EON service works to transmit PTY, a suitable station is detected without checking every preset station. When a station transmits EON information, it takes about 15 to 30 seconds for the unit to decode the EON information. After decoding the information, EON lights up on the display.

**When a station is not found**
"NOT FOUND" is displayed and the unit returns to the previous station.

**When the TRAFFIC program type is selected**
The unit searches for a station transmitting a *7TP code. However, the tuned station may not be broadcasting a traffic announcement currenly. Wait for a while. The tuned station broadcasts traffic information regularly and a traffic announcement will be made.

## EON SEARCH

During FM reception, the unit switches to radio programs with the specified PTY automatically as soon as they begin.

**1 Press PTY.**
The program type of the currently tuned station is displayed.

**2 Within 4 seconds, press ◀◀ o ▶▶ to select a program type.**

**3 Within 4 seconds, press ▮▮SET.**
"EON ON" is displayed for 3 seconds. Then "EON" starts flashing and the unit enters EON search standby mode. When radio program with the specified PTY in the another radio station begins, it interrupts the currently playing radio program and the radio program with the specified PTY is heard. At this time, "EON" flashed rapidly. At the end of the radio program with the specified PTY, the previous FM radio station is restored.
- EON search standby mode is stored until it is cancelled even if the power is turned off.

**To restore the previous FM station during reception of the radio program with the specified PTY**
Press ◀▶. At this time, EON search standby mode is cancelled.

**To cancel EON search standby mode**
Keep **PTY** pressed. (Do not release **PTY** yet.) "EON PTY" and the specified PTY are displayed alternately. At this time, press **▮▮SET** while pressing **PTY**. "EON OFF" is displayed and EON search standby mode is cancelled.

**NOTE**
The EON search function does not work when:
- FM stations are not preset.
- the signals of stations with the specified PTY are weak.

## OTHER FUNCTION OF RDS CODES

**Auto GEQ function**
The equalization curve is switched automatically to match the music program type of an RDS station.
**Press AG.**
"AG" lights up.
To cancel, press it again.

GEQ matching PTY:

| PTY | GEQ |
|---|---|
| POP M | POP |
| ROCK M | ROCK |
| LIGHT M | CLASSIC |
| CLASSIC | CLASSIC |
| JAZZ | CLASSIC |
| COUNTRY | POP |
| NATION M | POP |
| OLDIES | POP |
| FOLK M | CLASSIC |
| Others | off |

The selected GEQ can be changed to suit your preference by pressing **GEQ** on the remote control. During this time, the Auto GEQ function is cancelled.

**Clock-time (*8CT)**
The CT function provides the unit with information about the local time. The CT function works whenever a CT station is received.

**If you have not set the clock (the clock flashes on the display)**
The current time can be set automatically by tuning in to an RDS station.
If no RDS station is preset, keep ◀◀ or ▶▶ pressed until RDS lights up.

**If the clock does not agree with the broadcast time**
An RDS signal will update the clock time on the hour every hour.

*7 **Traffic program identification (TP)**
This is a code which informs the receiver that a tuned station regularly broadcasts traffic information.

*8 **Clock-time (CT)**
CT function provides an accurate clock signal which is self adjusting to time zones and seasonal time changes.

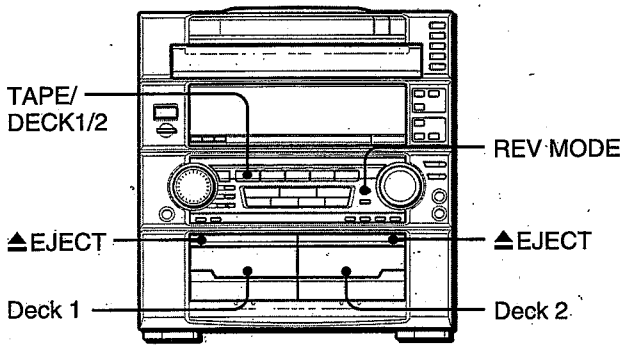
**To change the MW tuning interval**
The default setting of the MW tuning interval is 9 kHz/step. If you use this unit in an area where the frequency allocation system is 10 kHz/step, change the tuning interval.
Press **POWER** while pressing **TUNER/BAND** on the main unit. To reset the interval, repeat this procedure.

**NOTE**
When the MW tuning interval is changed, all preset stations are cleared. The preset stations have to be set again.

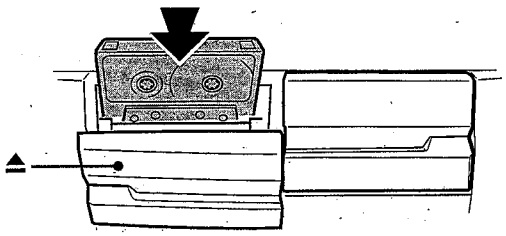
# BASIC OPERATIONS

## INSERTING TAPES

Use Type I (normal), Type II (high/$CrO_2$) or Type IV (metal) tapes for playback.

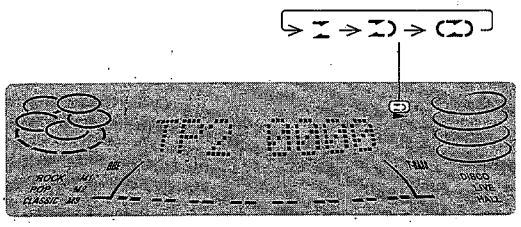



**Press TAPE, then press ⏏EJECT to open the cassette holder.**




Insert a tape with the exposed side down. Push the cassette holder to close.

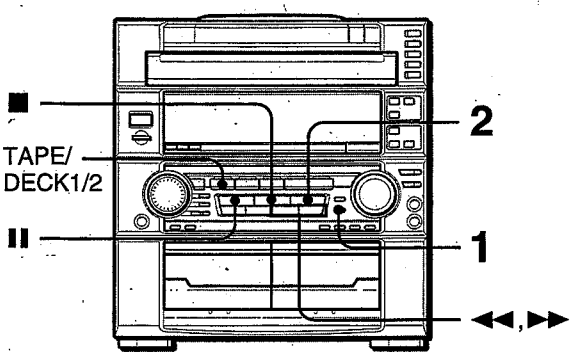
**To select a reverse mode on Deck 2**
Each time **REV MODE** is pressed, the reverse mode changes.



To play one side only, select ➡.
To play from front side to back side once only, select ➡).
To play both sides repeatedly, select (➡).

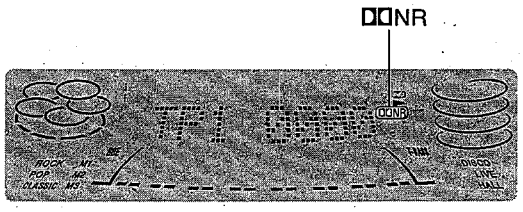
- When tapes are loaded in both decks, ➡) on the display indicates Continuous Play.
- On Deck 1, tapes are always played back on both sides once.

## PLAYING BACK A TAPE



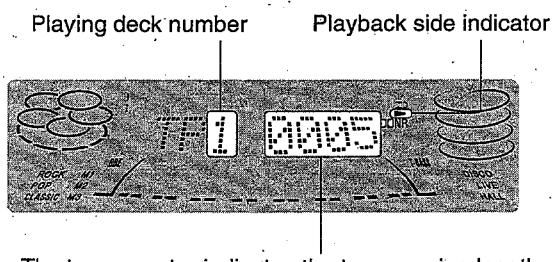

Insert a tape.

**1 Press DOLBY NR and turn Dolby NR on or off to match the playback tape.**




For tapes recorded with DOLBY NR, turn on DDNR.
For tapes recorded without DOLBY NR, turn off DDNR.

**2 Press ◀▶ to start play.**




▶: The front side is being played (forward).
◀: The back side is being played (reverse).

**When tapes are loaded in both decks**
Press **TAPE/DECK 1/2** first to select a deck.
The selected deck number is displayed.

**To stop play,** press ■.
**To pause play (Deck 2 only),** press II. To resume play, press again.
**To change the playback side,** press ◀▶**DIRECTION/PRESET** in play or pause mode.
**To fast forward or rewind,** press ◀◀ or ▶▶. Then press ■ to stop the tape.

**To start play when the power is off (Direct Play Function)**
Press **TAPE**. The power is turned on and play of the inserted tape begins.

**To set the tape counter to "0000"**
Press ■**CLEAR** in stop mode.
The counter is also set to "0000" when the cassette holder is opened.

## MUSIC SENSOR

If there is a 4-second or longer blank between each track, a search for the beginning of the current or next track during playback can be done easily.

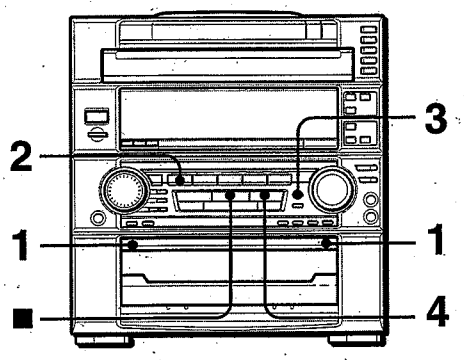
**When the ► indicator of ◄► is flashing,** press ►► to move to the next track, or ◄◄ to move to the beginning of the current track.

**When the ◄ indicator of ◄► is flashing,** press ◄◄ to move to the next track, or ►► to move to the beginning of the current track.

The search function may not be able to detect tracks under the following conditions:

- Blanks of less than 4 seconds between tracks
- Noisy blanks
- Long passages of low-end sound
- Low overall recording levels

# CONTINUOUS PLAY




After playback on one deck finishes, the tape in the other deck will start to play without interruption.

***1*** **Insert tapes into Deck 1 and Deck 2.**

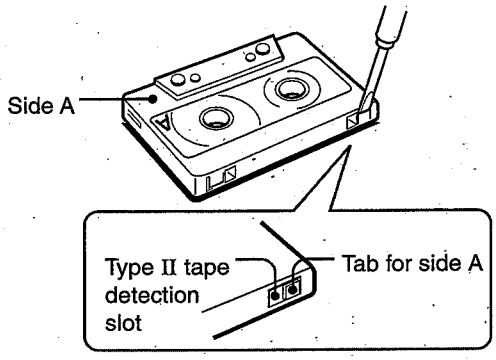
***2*** **Press TAPE/DECK 1/2 to select the deck to be played back first.**

***3*** **Press REV MODE to select ⇄.**

***4*** **Press ◄► to start playback.**
Playback continues until ■ is pressed.

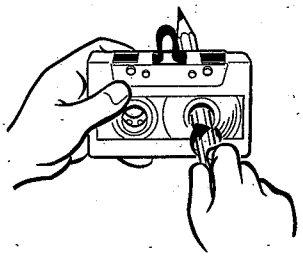
**About cassette tapes**

- **To prevent accidental erasure,** break off the plastic tabs on the cassette tape after recording with a screwdriver or other pointed tool.




To record on the tape again, cover the tab openings with adhesive tape, etc. (On Type II tapes, take care not to cover the Type II tape detection slot.)

- **120-minute or longer tapes** are extremely thin and easily deformed or damaged. They are not recommended.
- **Take up any slack in** the tape with a pencil or similar tool before use. Slack tape may break or jam in the mechanism.

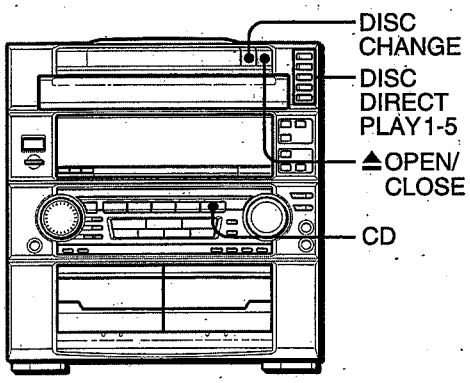


**DOLBY NR system**

The Dolby Noise Reduction system reduces tape hiss noise. For optimum performance when playing back a tape recorded with the DOLBY NR system, turn on the DOLBY NR system.

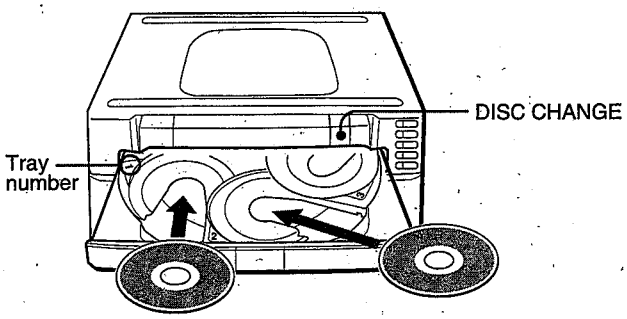
# BASIC OPERATIONS

## LOADING DISCS



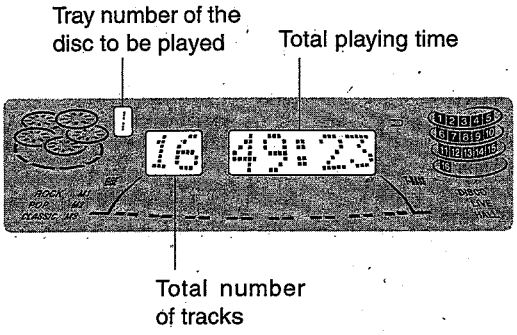

**Press CD, then press ▲OPEN/CLOSE to open the disc compartment. Load disc(s) with the label side up.**

**To load one or two discs,** place the disc(s) on the tray(s) in the direction of the arrows as illustrated.

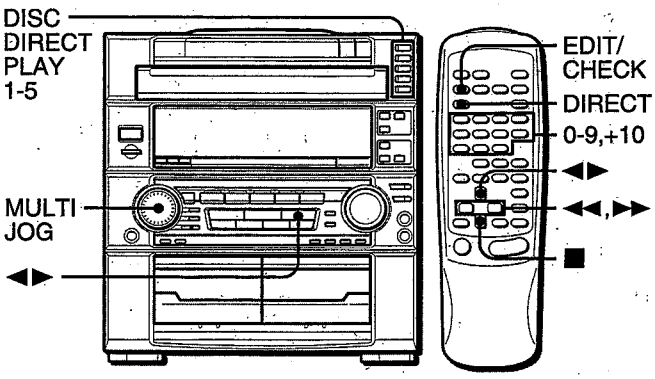



**To load three to five discs,** press **DISC CHANGE** to rotate the trays after placing two discs. Place the next disc on empty tray. Each time **DISC CHANGE** is pressed, the trays rotate and one disc can be placed.

**After placing the discs,** press **▲OPEN/CLOSE** to close the disc compartment.
The display shows the information of the disc to be played.

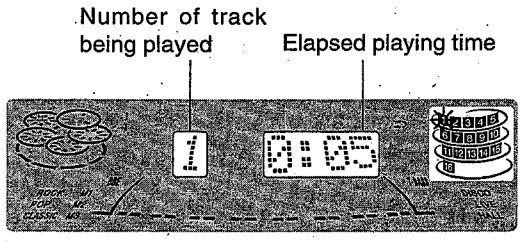



## PLAYING DISCS

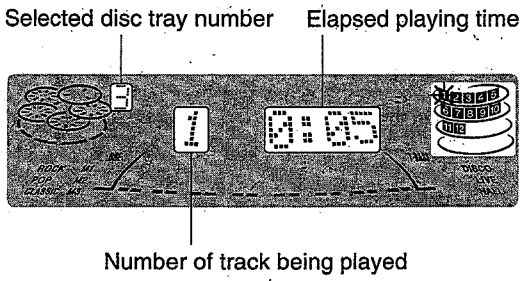



Load discs.

**To play all discs in the disc compartment, press ◄►.**
All discs are played once.
The indicator of **DISC DIRECT PLAY** flashes to indicate the disc being played.




**To play one disc only, press DISC DIRECT PLAY 1-5.**
The disc with the selected tray number is played once.
Only the indicator of the selected **DISC DIRECT PLAY** flashes.




**To play with the remote control**
Press **DIRECT**, then press one of the numbered buttons **1-5** within 3 seconds to select a disc.

**To stop play,** press ■.
**To pause play,** press ❚❚. To resume play, press again.
**To search for a particular point during playback,** keep ◄◄ or ►► pressed and release the button at the desired point.
**To skip to the beginning of a track during playback,** turn **MULTI JOG** or press ◄◄ or ►► repeatedly.
**To remove discs,** press **▲OPEN/CLOSE.**
You can only remove the two discs that face you. When the disc(s) to be removed does(do) not face you, press **DISC CHANGE** repeatedly.

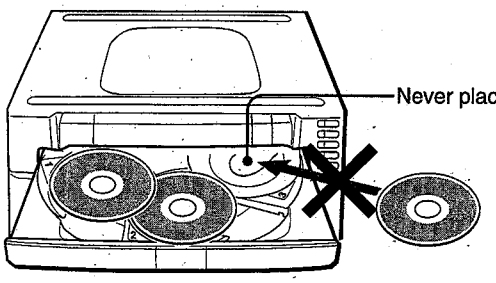
**To start play when the power is off (Direct Play Function)**
Press **CD**. The power turns on and play of the loaded disc(s) begins.
When **▲OPEN/CLOSE** is pressed, the power is also turned on.

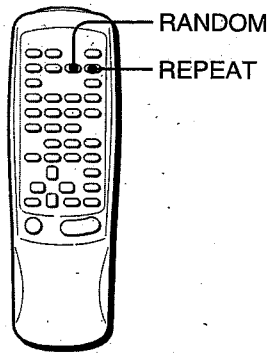
**To check the remaining time**
Press **EDIT/CHECK** on the remote control during play. The amount of time remaining until all tracks finish playing is displayed. To restore the playing time display, press **EDIT/CHECK**.

**Selecting a track with the remote control**
1 Press **DIRECT**, then press one of the numbered buttons **1-5** within 3 seconds to select a disc.
2 Press the numbered buttons **0-9** and **+10** to select a track.
*Example:*
To select the 25th track, press **+10**, **+10** and **5**.
To select the 10th track, press **+10** and **0**.
The selected track starts to play and play continues to the end of that disc.

**Replacing discs during play**
While one disc is playing, the other discs can be replaced without interrupting play.
1 Press **DISC CHANGE**.
Two discs can be replaced.
2 Remove the discs and replace with other discs.
To replace the other two discs, press **DISC CHANGE** again.
3 Press **▲OPEN/CLOSE** to close the disc compartment.

**NOTE**
- When loading an 8-cm (3-inch) disc, make sure to place it onto the inner circle of the tray precisely. Otherwise, the disc may be damaged or the disc compartment will not open. If it does not open, please consult your Aiwa dealer for repair.
- Do not place more than one compact disc on one disc tray.
- Do not tilt the unit with discs loaded. Doing so may cause malfunctions.
- When transporting the unit, remove the discs from the trays.
- When replacing the discs during play, do not replace discs other than those facing you.
If you place a disc on the empty right inner tray, and then press **▲ OPEN/CLOSE**, "ERROR" is displayed and the disc compartment may not close. Remove the disc on that tray.




## RANDOM PLAY

All the tracks on the selected disc or on all the discs can be played randomly.

**Press RANDOM on the remote control.**
"RANDOM" lights up on the display.

**To cancel random play**, press again.

**To play all discs**, press ◄► to start play.
**To play a single disc**, press **DISC DIRECT PLAY 1-5** to start play.

**NOTE**
During random play, it is not possible to skip to the previously played track with ◄◄.

## REPEAT PLAY

A single disc or all the discs can be played repeatedly.

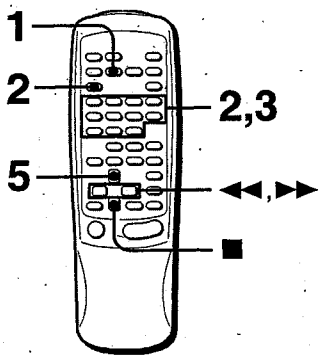
**Press REPEAT on the remote control.**
"↻" lights up on the display.

**To cancel repeat play**, press again.

**To play all discs**, press ◄► to start play.
**To play a single disc**, press **DISC DIRECT PLAY 1-5** to start play.

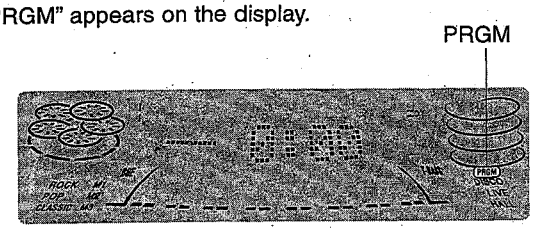
# PROGRAMMED PLAY

Up to 30 tracks can be programmed from any of the inserted discs.




Use the remote control.

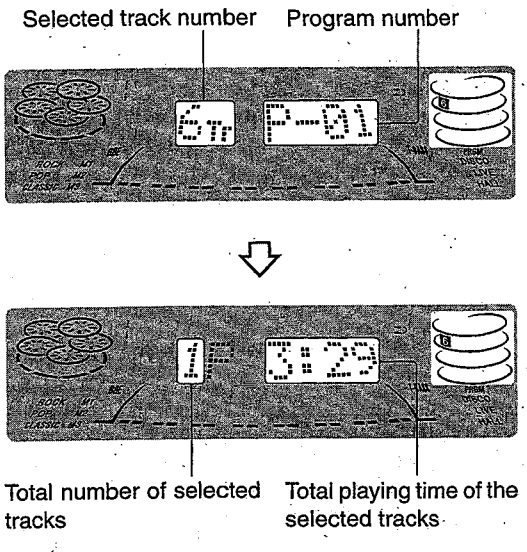
***1* Press PRGM twice in stop mode.**
"PRGM" appears on the display.




- When **PRGM** is pressed once in step 1, the unit enters the CD KARAOKE PROGRAM (page 26).

***2* Press DIRECT, then press one of the numbered buttons 1-5 within 3 seconds to select a disc.**
Go to the next step when the tray stops rotating.

***3* Press the numbered buttons 0-9 and +10 to program a track.**
*Example:*
To select the 25th track, press **+10**, **+10** and **5**.
To select the 10th track, press **+10** and **0**.




***4* Repeat steps 2 and 3 to program other tracks.**

***5* Press ◀I▶ to start play.**

**To check the program**
Each time ◀◀ or ▶▶ is pressed in stop mode, a disc number, track number, and program number will be displayed.

**To clear the program**
Press ■**CLEAR** in stop mode.

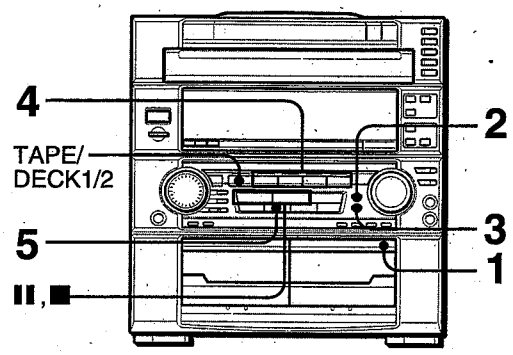
**To add tracks to the program**
Repeat steps 2 and 3 in stop mode. The track will be programmed after the last programmed track.

**To change the programmed tracks**
Clear the program and repeat all the steps again.

**NOTE**
During programmed play, you can not use random play, check the remaining time or select a disc or track .

# BASIC RECORDING

This section explains how to record from the tuner, CD player, or external equipment.

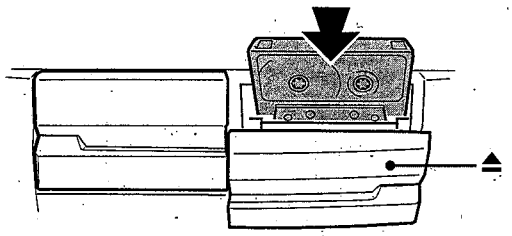



**Preparation**

- Set the tape to the point where recording will start.
- Use Type I (normal) and Type II (high/CrO2) tapes for recording.

***1* Insert the tape to be recorded on into Deck 2.**

Insert the tape with the side to be recorded on first facing out from the unit.



***2* Press REV MODE to select the reverse mode.**

To record on one side only, select ⇄.
To record on both sides, select ⇄ or (⇄).

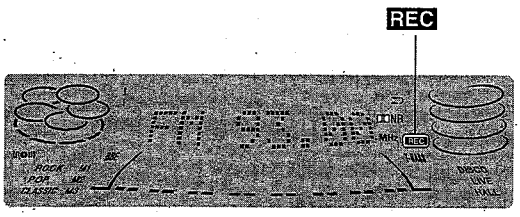
***3* Press DOLBY NR to turn Dolby NR on or off.**

To record with DOLBY NR, turn on DNR.
To record without DOLBY NR, turn off DNR.

***4* Press one of the function buttons and prepare the source to be recorded.**

**To record from a CD,** press **CD** and load the disc(s).
**To record from a radio broadcast,** press **TUNER** and tune in to a station.
**To record from the connected source,** press **PHONO** or **VIDEO/AUX** and play.

***5* Press ●REC/REC MUTE to start recording.**



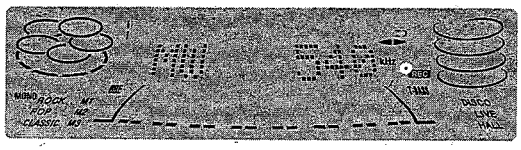

When the selected function is CD, playback and recording start simultaneously.

**To stop recording,** press ■.
**To pause recording,** press II. (Applicable when the recording source is TUNER, PHONO or VIDEO/AUX.) To resume recording, press again.

**To start recording with the remote control**
First press ●/○**REC/REC MUTE**, and then press ◄► within 2 seconds.

**NOTE**

If squealing or beating sounds occur when recording an MW or LW broadcast, press **MONO TUNER** on the remote control, so as to eliminate the noise.
By pressing the button repeatedly, the dot light on the upper left side of "REC" is turned on and off in the display window.



## SOUND ADJUSTMENT DURING RECORDING

The output volume and tone (except BBE) of the speakers or headphones may be freely varied without affecting the recording.

## INSERTING BLANK SPACES

Insertion of 4-second blank spaces enables you to activate the Music Sensor function. (Applicable when the source is TUNER, PHONO or VIDEO/AUX.)

1 **Press ●REC/REC MUTE during recording or while in recording pause mode.**
REC on the display flashes for 4 seconds and a 4-second blank space is made. Then, the deck enters the recording pause mode.
2 **Press II to resume recording.**

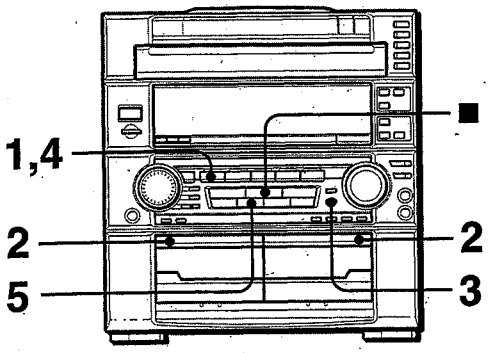
**To insert a blank space of less than 4 seconds,** press **●REC/REC MUTE** again while REC is flashing.
**To insert blank spaces of more than 4 seconds,** after the deck enters recording pause mode, press **●REC/REC MUTE** again. Each time the button is pressed, a 4-second blank space is added.

**To erase a recording**

Make sure the microphone is not connected to the unit.
Set the microphone volume and the echo level to OFF (page 24).

1 Insert the tape to be erased into Deck 2 and press **TAPE/DECK 1/2** to display "TP2".
2 Set the tape to the point where the erasure is to be started.
3 Set the reverse mode by pressing **REV MODE**.
4 Press **●REC/REC MUTE** to start the erasure.

# DUBBING A TAPE MANUALLY




**Preparation**
- Set the tape to the point where recording will start.
- The reverse mode is automatically set to ⇄. Note that recording will be done on one side of the tape only.

*1* **Press TAPE.**

*2* **Insert the original tape into Deck 1 and the tape to be recorded on into Deck 2.**
Insert the tapes with the sides to be played back or recorded on first facing out from the unit.

*3* **Press DOLBY NR to turn off the Dolby NR.**
DD NR on the display goes out.

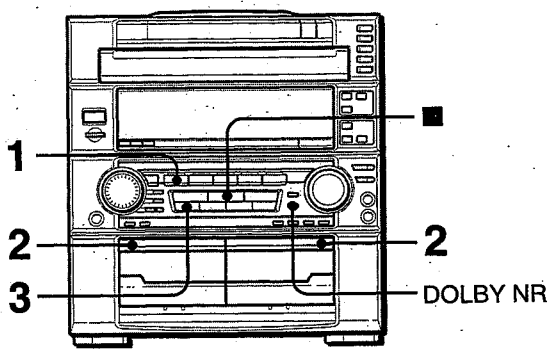
*4* **Press TAPE/DECK 1/2 to select Deck 1.**
"TP1" is displayed.

*5* **Press ●REC/REC MUTE to start recording.**
Playing and recording start simultaneously.

**To stop dubbing**
Press ■.

**To set the Dolby NR when playing back the dubbed tape**
Press **DOLBY NR** and turn Dolby NR on or off to match the original tape.

# DUBBING THE WHOLE TAPE




This function allows you to make exact copies of both sides of the original tape. The reverse side of both tapes will start simultaneously as soon as the longer tape has been reversed.

**NOTE**
- Dubbing does not start from a point halfway in the tape.
- The reverse mode is automatically set to ⇄. Recording will be done on both sides.
- The Dolby NR does not affect recording.

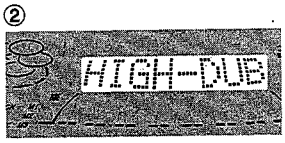
*1* **Press TAPE.**

*2* **Insert the original tape into Deck 1 and the tape to be recorded on into Deck 2.**
Insert each tape with the side to be played back or recorded on first facing out from the unit.

*3* **Press SYNC DUB once or twice to start recording.**
① **For recording at normal speed,** press it once to display "NORM-DUB".
② **For recording at high speed,** press it twice to display "HIGH-DUB".

①

②




The tapes are rewound to the beginning of the front sides, and recording starts.

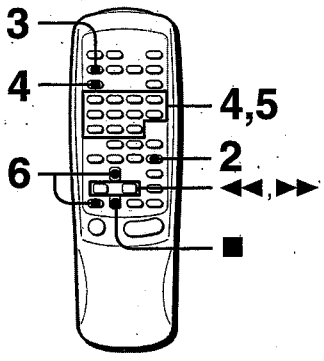
**To stop dubbing**
Press ■.

**To set the Dolby NR when playing back the dubbed tape**
Press **DOLBY NR** and turn Dolby NR on or off to match the original tape.

**NOTE**
Recording does not start if the erasure prevention tab on either side of the tape is broken off.

En

# AI EDIT RECORDING




The AI edit recording function enables CD recording without worrying about tape length and track length. When a CD is inserted, the unit automatically calculates the total track lengths. If necessary, the order of tracks is rearranged so that no track is cut short.
(AI: Artificial Intelligence)

**NOTE**

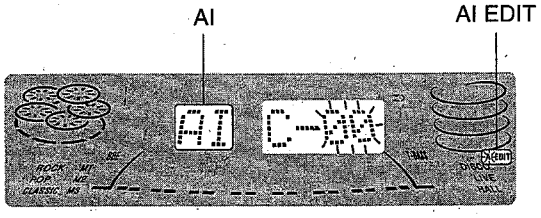
The AI edit recording will not start from a point halfway into the tape. The tape must be recorded from the beginning of either side.

Use the remote control from steps 3 to 6.

***1*** **Insert the tape into Deck 2, and press DOLBY NR to turn Dolby NR on or off.**
Insert the tape with the side to be recorded on first facing out from the unit.

***2*** **Press CD and load the disc(s).**

***3*** **Press EDIT/CHECK once.**
"AI EDIT" and "AI" light up on the display.

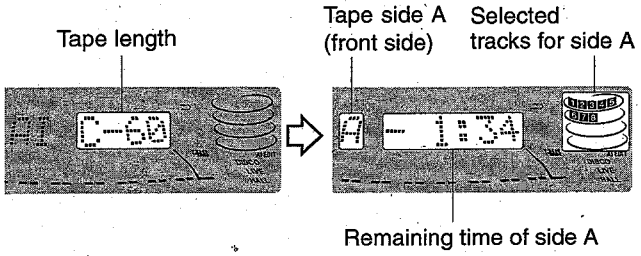



When "PRGM" is displayed, press **EDIT/CHECK** again.

***4*** **Press DIRECT, then press one of the numbered buttons 1-5 within 3 seconds to select a disc.**

***5*** **Press the numbered buttons 0-9 to designate the tape length.**
10 to 99 minutes can be specified.
*Example:* When using a 60-minute tape, press **6** and **0**.

In a few seconds, the tracks to be recorded on each side of the tape are determined.
•◀◀ and ▶▶ are also available to designate the tape length.

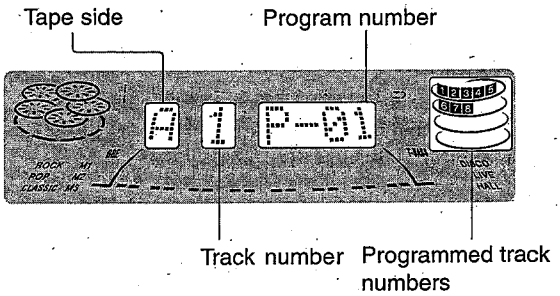



***6*** **First press ●/OREC/REC MUTE, then press ◀▶ within 2 seconds to start recording.**
The tape is rewound to the beginning of the front side, the lead segment is played through for 10 seconds, and recording starts. When recording on the front (side A) ends, recording on the back (side B) starts.

**To stop recording**
Press ■. Recording and CD play stop simultaneously.

**To clear the edit program**
Press ■ twice so that "EDIT" disappears on the display.

**To check the order of the programmed track numbers**
Before recording, press **EDIT/CHECK** to select side A or B, and press ◀◀ or ▶▶ repeatedly.



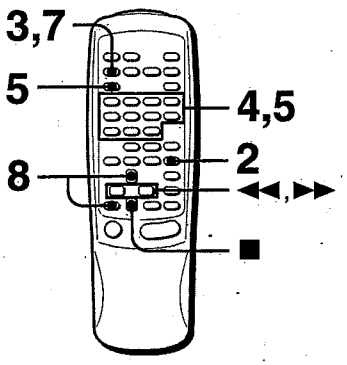

**To add tracks from other discs to the edit program**
If there is any time remaining on the tape after step 5, you can add tracks from other discs in the CD compartment.
1 Press **EDIT/CHECK** to select side A or B.
2 Press **DIRECT**, then press one of the numbered buttons **1-5** within 3 seconds to select a disc.
3 Press the numbered buttons **0-9** and **+10** to select the tracks. A track whose playing time is longer than the remaining time cannot be programmed.
4 Repeat steps 2 and 3 to add more tracks.
5 Start recording.

**Time on cassette tapes and editing time**
The actual cassette recording time is usually a little longer than the specified recording time printed on the label. This unit can program tracks to use the extra time. When the total recording time is a little longer than the tape's specified recording time after editing, the display shows the extra time (without a minus mark), instead of the time remaining on the tape (with the minus mark).

**NOTE**

- Recording is inhibited if the erasure prevention tab on either side of the tape is broken off.
- The AI edit function cannot be used with discs containing 31 tracks or more.

# PROGRAMMED EDIT RECORDING




In the Programmed edit recording function, the tracks can be programmed while checking the remaining time on each side of the tape as the tracks are programmed.

**NOTE**

The programmed edit recording will not start from a point halfway in the tape. The tape must be recorded on from the beginning of either side.

Use the remote control from steps 3 to 8.

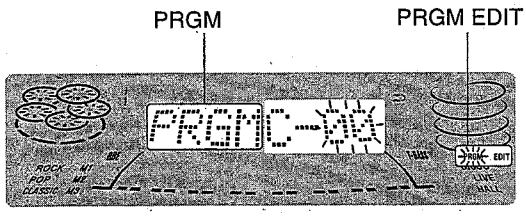
***1*** **Insert the tape into Deck 2, and press DOLBY NR to turn Dolby NR on or off.**

Insert the tape with the side to be recorded on first facing out from the unit.

***2*** **Press CD and load the disc(s).**

***3*** **Press EDIT/CHECK twice.**

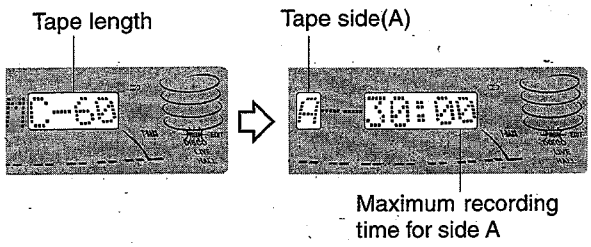
"PRGM EDIT" and "PRGM" light up on the display.




When "AI" is displayed, press **EDIT/CHECK** again.

***4*** **Press the numbered buttons 0-9 to designate the tape length.**

10 to 99 minutes can be specified.

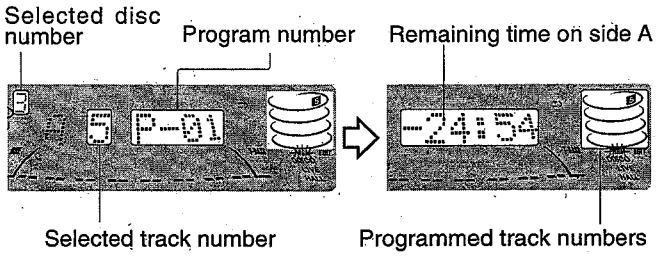



***5*** **Press DIRECT, then press one of the numbered buttons 1-5 within 3 seconds to select a disc. Then, press the numbered buttons 0-9 and +10 to program a track.**

*Example:* To select the 10th track of disc 2, press **DIRECT** and **2**, then **+10** and **0**.

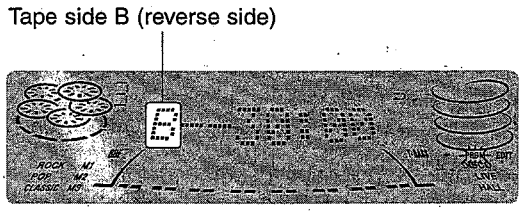
***6*** **Repeat step 5 for the rest of the tracks for side A.**

A track whose playing time is longer than the remaining time cannot be programmed.




***7*** **Press EDIT/CHECK to select side B and program the tracks for side B.**

After confirming B on the display, repeat step 5.




***8*** **Press ●/○REC/REC MUTE and then press ◀▶ within 2 seconds to start recording.**

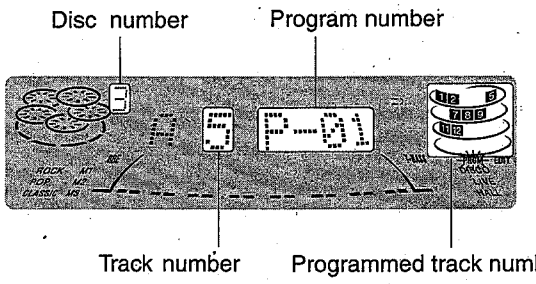
The tape is rewound to the beginning of the front side, the lead segment is played through for 10 seconds, and recording starts. When recording on the front side A ends, recording on the back side B starts.

**To stop recording**

Press ■. Recording and CD play stop simultaneously.

**To check the order of the programmed track numbers**

Before recording, press **EDIT/CHECK** to select side A or B, and press ◀◀ or ▶▶ repeatedly.




**To change the program of each side**

Press **EDIT/CHECK** to select side A or B, and press **■CLEAR** to clear the program on the selected side. Then program tracks again.

**To clear the edit program**

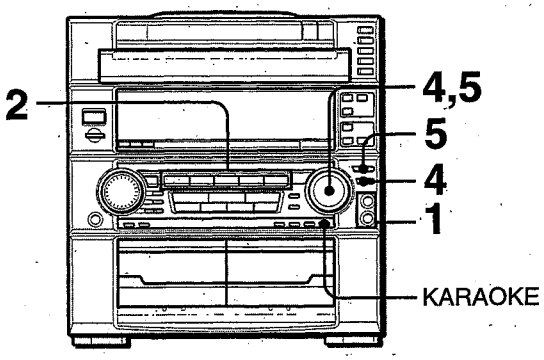
Press **■CLEAR** twice so that "EDIT" disappears on the display.

**NOTE**

- Recording is inhibited if the erasure prevention tab on either side of the tape is broken off.
- Up to 30 tracks can be programmed from any of the inserted discs.

KARAOKE

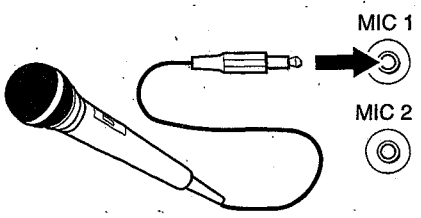
# MICROPHONE MIXING




Two microphones (not supplied) can be connected to this unit, allowing you to sing along to music sources.
Use microphones with standard plugs (ø6.3 mm, 1/4 inch).

**Before connecting a microphone**
Press **MIC** and turn **VOLUME** anti-clockwise until "MIC OFF" is displayed.

**1 Connect your microphones to MIC 1 and MIC 2 jacks.**




**2 Press one of the function buttons to select the source to be mixed, and play the source.**

**3 Adjust the volume and tone of the source.**

**4 Press MIC and turn VOLUME within 4 seconds to adjust the microphone volume.**
The microphone volume can be selected from 1 to MAX (7) or OFF (cancel).
The volume of both microphones is adjusted simultaneously.

**5 Press ECHO and turn VOLUME within 4 seconds to adjust the echo level.**
The echo level can be selected from 1 to MAX (7) or OFF (cancel).

**To change the delay time of echo**
Hold down **ECHO** while the echo is on. "ECHO-L" (Long) and "ECHO-M" (Middle) are displayed alternately. At the desired position, release the button.

**To record microphone sound mixed with source sound**
Follow the procedure for recording from the sound source (see page 20).
**SYNC DUB** cannot be used for mixing recording.

**When the microphones are not in use**
Set the microphone volume and echo level to OFF and remove the microphones from **MIC** jacks.

**NOTE**

- ECHO is reset to OFF automatically when the function is changed, the DOLBY PRO LOGIC or the DSP SURROUND mode button is pressed, the power is turned off, or the AC cord is disconnected.
- If the MIC or ECHO is turned on while the 5.1CH (page 32) is selected, the 5.1CH is changed to the VIDEO.
- When the ECHO level is changed, the DSP SURROUND system and the DOLBY PRO LOGIC are automatically cancelled.
- When the headphones are connected, the DSP SURROUND system and the DOLBY PRO LOGIC are automatically cancelled.
- If a microphone is held too near the speakers, a howling sound may be produced. In this case, hold the microphone away from the speakers, or decrease the microphone volume.
- If sound through the microphone is extremely loud, it may be distorted. In this case, decrease the microphone volume.

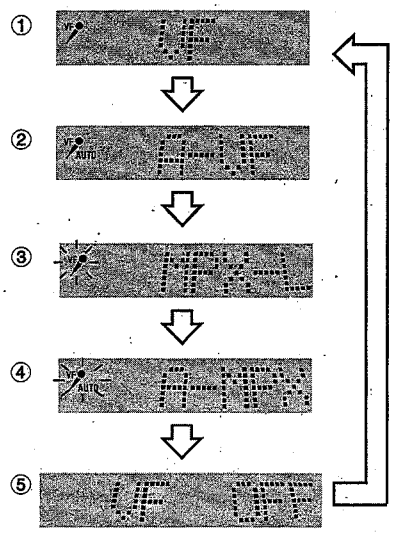
**Recommended microphones**
Use of unidirectional type microphones is recommended to prevent howling. Contact your local Aiwa dealer for details.

## VOCAL FADER/MULTIPLEX FUNCTIONS

This unit can use discs or tapes as Karaoke sources.
- Use the vocal fader function for ordinary discs or tapes.
- Use the multiplex function for multi audio discs or tapes.

### Press KARAOKE repeatedly to select the vocal fader or multiplex function.

Each time **KARAOKE** is pressed, one of the following functions is selected cyclically.




**① Vocal Fader**
The singer's voice becomes softer than the accompaniment.

**② Auto Vocal Fader**
The singer's voice becomes softer only while there is audio input through a microphone.

**③ Multiplex**
Only the sound on the left channel is heard from both speakers, and the sound on the right channel is muted.

**④ Auto Multiplex**
The sound on the left channel is heard from both speakers, and the sound on the right channel is muted only while there is audio input through a microphone.

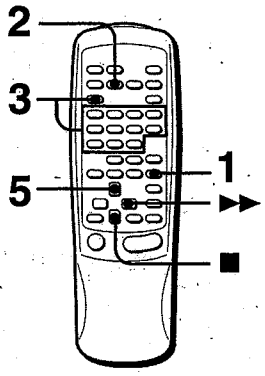
**⑤ Cancel**

**To change the time lag setting in Auto Vocal Fader or Auto Multiplex function**
The muted singer's voice can be restored faster.
When Auto Vocal Fader or Auto Multiplex is selected, "A-VF" or "A-MPX" is displayed for 3 seconds and disappears. Then keep pressing **KARAOKE** until "FAST" is displayed.
To return to the initial setting, select SLOW.
When the power is turned off, SLOW is restored.

**To change the audible channel in Multiplex function**
Only the sound on the right channel can be heard from both speakers.
When Multiplex is selected, "MPX-L" is displayed for 3 seconds and disappears. Then the selected function name is displayed, keep pressing **KARAOKE** until "MPX-R" is displayed.
To return to the initial setting, select MPX-L.
When the power is turned off, MPX-L is restored.

**NOTE**
- The Karaoke functions may not operate correctly with the following kinds of CDs or tapes.
  - Those with monaural sound
  - Those recorded with strong echoes
  - Those with the vocal part recorded on the right or left side of the sound width
- While the Karaoke function is on, the sound is output as monaural.
- When the function is changed, the Karaoke function is cancelled.

# CD KARAOKE PROGRAM

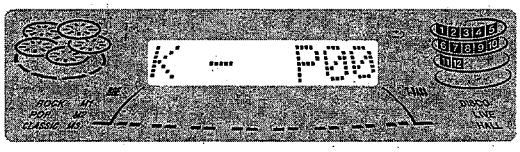



Before or during CD play, you can reserve up to 15 tracks to be played after the current track. Each reservation is cleared when it finishes playing.

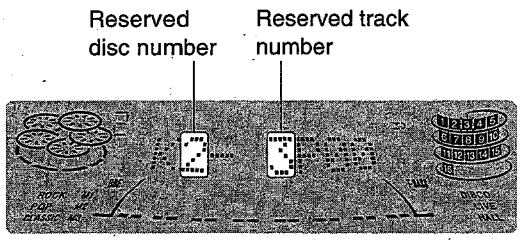
Use the remote control.

***1* Press CD and load the discs.**

***2* Press PRGM once.**
"CD KARAOKE" scrolls on the display and "K-P00" appears.

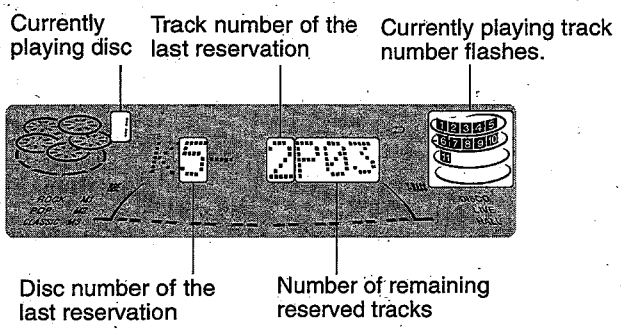


***3* Press DIRECT, then one of the numbered buttons 1-5 within 3 seconds to select a disc. Then, press the numbered buttons 0-9 and +10 to select a track.**




***4* Repeat step 3 to reserve other tracks.**

***5* Press ◀▶ to start play.**
After a track is played, it is cleared from the program.


Currently playing disc
Track number of the last reservation
Currently playing track number flashes.
Disc number of the last reservation
Number of remaining reserved tracks

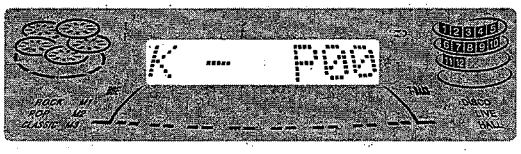
**To add a reservation during play**
Repeat step 3.

**To check the reserved tracks**
Press **EDIT/CHECK** repeatedly. Each time it is pressed, the disc number and track number are displayed in the reserved order.

**To stop play**
Press ■. When ◀▶ is pressed, the play starts from the last track again.

**To skip a track**
Press ▶▶.
The skipped track is cleared from the program.

**To clear all the reservations**
In stop mode, press ▶▶ repeatedly until "K - P00" is displayed.



Press it once more to cancel the Karaoke programs. The display returns to that of CD play.

**NOTE**

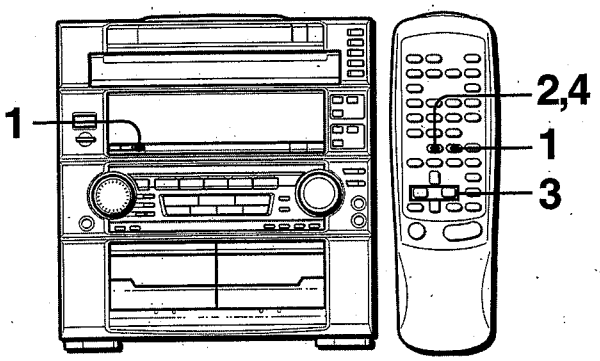
- If the reserved track number does not exist on the selected disc, the unit stops playing and the display flashes. In this case, press ▶▶ to skip the error track. Then press ◀▶ to start play with the next reserved track.
- When **PRGM** is pressed twice in step 2, "PRGM" is displayed and the unit enters CD programmed play mode (page 19). To cancel programmed play, press ■.

## DOLBY PRO LOGIC

The DOLBY PRO LOGIC feature and the centre and rear speakers (standard) assure full-scale home theater sound. When playing back laser discs or video software that have been recorded in Dolby Surround, astonishingly realistic sound surrounds the listener to create a new level of audio/visual entertainment.
Independent control of the four sound channels allows the listener to enjoy the same type of sound reproduction experienced in movie theaters. Voices are reproduced in the front and center sound field, while ambient sounds like cars and crowds are reproduced on all sides of the listener for an incredibly lifelike audio/video experience. Please read the following carefully to "tune" the system's output to match the characteristics of your listening space.

Check the following:
- **Before using the DOLBY PRO LOGIC, adjust the proper balance of speaker sound levels.**
- Make sure the supplied speakers are properly connected and positioned (see pages 4, 5).
- Make sure the TV set and video unit are properly connected (see page 5).
- Make sure the laser disc, video tape, etc., support DOLBY SURROUND.

# ADJUSTING SPEAKER LEVEL

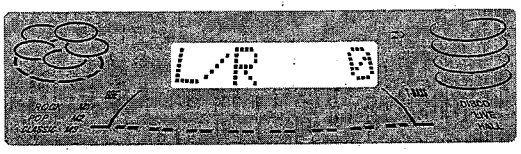



The unit is equipped with a built-in test signal generator called a noise sequencer for easy balance adjustment of all 5 channels. The sequencer outputs a noise signal that "travels" from channel to channel, enabling the simple adjustment of sound level to achieve, at the listening position, the same apparent loudness from each channel.

Use the remote control.

### *1* Press DOLBY PRO LOGIC to select NORMAL.
"NORMAL" is displayed.
If " PHANTOM" or "3 STEREO" is displayed, press **DOLBY PRO LOGIC** repeatedly until "NORMAL" is selected.

### *2* Press MANUAL SELECT (TEST) and hold it down for about 4 seconds until "L" lights.




A noise signal is sent to each channel in turn in the following sequence.

→ **L**: Left speaker → **CEN**: Centre speaker → **R**: Right speaker →
← **S-L**: Left surround speakers ← **S-R**: Right surround speakers ←

### *3* Adjust the sound level of the centre and the surround speakers.
While "CEN", "S-R" or "S-L" is displayed, press ◀◀ or ▶▶ to adjust the volume of the centre or surround speakers to match the level of the left and right speakers.

To adjust the balance between the left and right front speakers, see page 8. At this time, the DOLBY PRO LOGIC mode should be cancelled by pressing **DOLBY PRO LOGIC** until "P-OFF" is displayed.

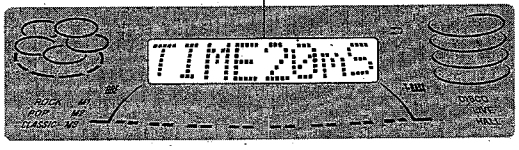
### *4* Press MANUAL SELECT (TEST) again to stop the noise signal.

**NOTE**
- If the surround speakers or the centre speakers level of the DOLBY PRO LOGIC is changed, that of the DSP SURROUND system (page 10) and the DOLBY DIGITAL SURROUND (page 32) is also changed.
- While "S-R" or "S-L" is displayed, both surround speakers output the noise signal together. However, only the sound level of one surround speaker displayed as "S-R" or "S-L" can be adjusted.

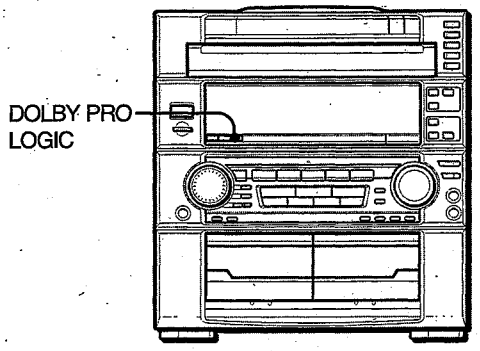
**About the channels**
**The left and right speakers** create the stereo effect.
**The centre speaker** helps achieve precise sound positioning over a broad sound field.
**The rear-mounted surround speakers** enhance the "depth" of the sound field.

**To change the delay time**
The surround speakers reproduce sounds a split second after the front speakers. The delay is initially set to 20 ms (milliseconds).
To change this standard delay time, press **MANUAL SELECT (TEST)** on the remote control repeatedly in NORMAL or PHANTOM mode until "TIME" is displayed. Then, press ◀◀ or ▶▶. Each time one of the buttons is pressed, the delay time changes as shown below.

15mS ⟷ 20mS ⟷ 30mS



# PLAY WITH DOLBY PRO LOGIC




**1 Press VIDEO/AUX and start playback of the video source.**

**2 Press DOLBY PRO LOGIC.**
NORMAL is selected, and the playback sound has the DOLBY PRO LOGIC effect.

**To cancel DOLBY PRO LOGIC mode**
Press **DOLBY PRO LOGIC** repeatedly until "P-OFF" is displayed.

**To change the sound levels**
After adjusting the balance with the noise sequencer, the sound levels of the centre or surround speakers can be adjusted during playback of laser discs or video software.
1 Press **MANUAL SELECT (TEST)** on the remote control repeatedly to select "CEN" (centre), "S-R" (Right surround) or "S-L" (Left surround).
2 While the "CEN", "S-R" or "S-L" is displayed, press ◀◀ or ▶▶ on the remote control to adjust the volume.

## ADDITIONAL DOLBY PRO LOGIC MODES

In addition to the NORMAL mode, this unit is also equipped with the PHANTOM and the 3 STEREO modes.
**PHANTOM mode:** Use this mode when no centre speaker is connected. The center channel signals are output through the left and right speakers.
**3 STEREO mode:** Use this mode when no surround speakers are connected. This mode reproduces rear sounds through the front speakers.

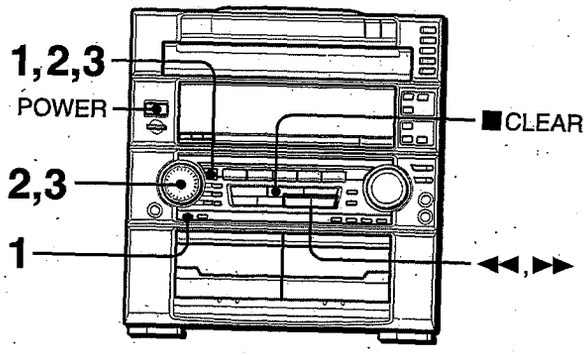
**To select PHANTOM or 3 STEREO**
Press **DOLBY PRO LOGIC** repeatedly until the desired Dolby Pro Logic mode is displayed. The DOLBY PRO LOGIC mode is displayed cyclically as follows.

NORMAL → PHANTOM → 3 STEREO → P-OFF (cancel) → NORMAL

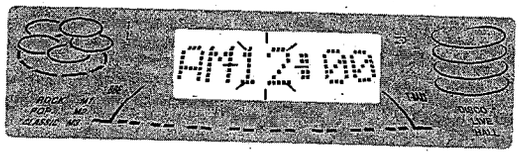
**To adjust the balance of connected speaker sound levels**
Carry out steps 2 to 4 on pages 27.

**NOTE**
- Depending on the sound source and/or listening conditions, surround effect may not be obtained even when the DOLBY PRO LOGIC is on.
- The full DOLBY PRO LOGIC effect cannot be obtained when using software without DOLBY SURROUND mark. In this case, use the DSP SURROUND system instead (see page 10).
- The DOLBY PRO LOGIC is automatically cancelled when;
  - the ECHO level is changed.
  - the DSP SURROUND system or the BBE is turned on.
  - the headphones are plugged in.
  - the Karaoke function is turned on.
  - the 5.1CH (page 32) is turned on.
- Set the microphone volume to OFF while the DOLBY PRO LOGIC is on. Otherwise, the DOLBY PRO LOGIC sound cannot be reproduced correctly.

# SETTING THE CLOCK




**1 Press CLOCK, then press ENTER within 4 seconds.**



**2 Turn MULTI JOG to designate the hour, then press ENTER.**
The hour stops flashing and the minute starts flashing.

**3 Turn MULTI JOG to designate the minute, then press ENTER.**
The minute stops flashing on the display and the clock starts from 00 seconds.

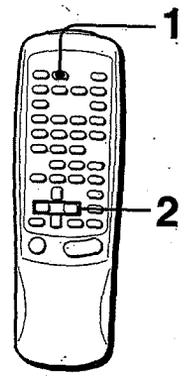
**◀◀* and ▶▶* are also available instead of **MULTI JOG**.*
***II*SET* is also available instead of **ENTER**.*

**To display the current time**
Press **CLOCK**. The time is displayed for 4 seconds.
However, the time cannot be displayed during recording.

**To switch to the 24-hour standard**
Press **CLOCK**, then press ■ within 4 seconds.
Repeat the same procedure to restore the 12-hour standard.

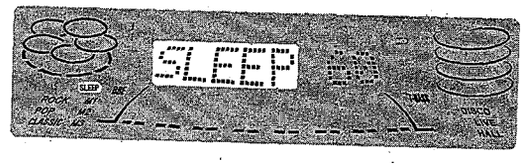
**If the clock display flashes**
This is caused by a power interruption. The current time needs to be reset.
If power is interrupted for more than approximately 24 hours, all settings stored in memory after purchase need to be reset.

# SETTING THE SLEEP TIMER

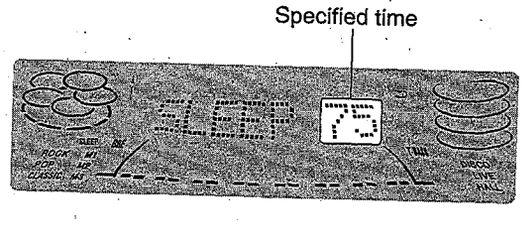



The unit can be turned off automatically at a specified time.

**1 Press SLEEP on the remote control.**



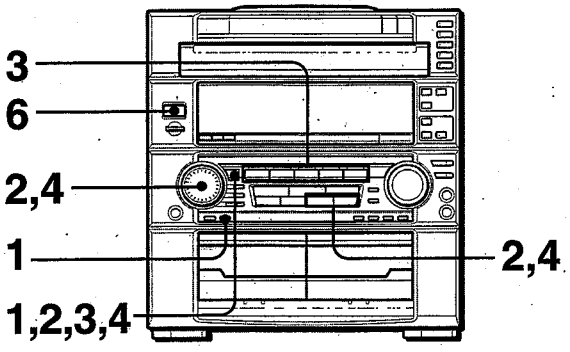

**2 Within 3 seconds, turn MULTI JOG or press ◀◀ or ▶▶ to specify the time until the power is turned off.**
The time changes between 5 and 240 minutes in 5-minute steps.




**To check the time remaining until the power turns off**
Press **SLEEP** once. The remaining time is displayed for 3 seconds.

**To cancel the sleep timer**
Press **SLEEP** twice so that "SLEEPoFF" appears.

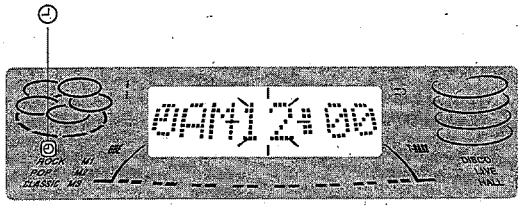
# SETTING THE TIMER




The unit can be turned on at a specified time every day with the built-in timer.

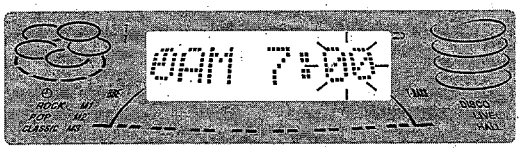
**Preparation**
Make sure the clock is set correctly.

***1*** **Press TIMER to display ⏲, then press ENTER within 6 seconds.**
⏲ is displayed, and the hour flashes.



**NOTE**
If you press **ENTER** after 6 seconds, another operation may start.

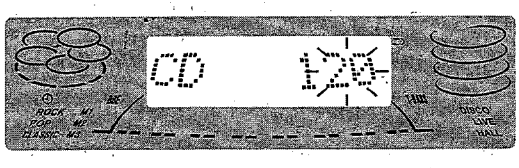
***2*** **Designate the hour of the timer-on time by turning MULTI JOG, then press ENTER. Repeat to designate the minute of the timer-on time.**



After you designate the timer-on time, one of the source names flashes on the display.

***3*** **Press one of the function buttons to select a source, then press ENTER.**
The selected source name flashes. At this time, the selected function button does not light up in red.
- If **TUNER** is pressed, the band cannot be selected in this step.

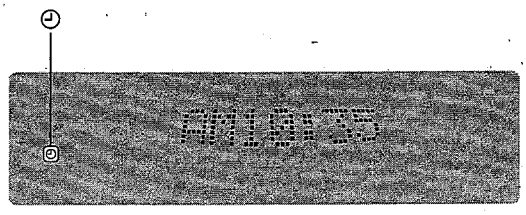
***4*** **Select the duration for the timer-activated period with MULTI JOG.**



The duration for the timer-activated period can be set between 5 and 240 minutes in 5-minute steps.

***5*** **Prepare the source.**
**To listen to a CD,** load the disc to be played first on tray 1.
**To listen to a tape,** insert the tape into Deck 1 or 2.
**To listen to the radio,** tune in to a station.

***6*** **Press POWER to turn the unit off after adjusting the volume and tone.**
⏲ remains on the display after the power is turned off (timer standby mode).



When the timer-on time is reached, the unit turns on and begins play with the selected source.
- The volume level is automatically set to 20 when the power is turned off with the volume level set to 21 or more.

**To check the specified time and source**
Press **TIMER**. The timer-on time and the selected source name with the duration for the timer-activated period are displayed alternately for 6 seconds.

**To cancel timer standby mode temporarily**
Press **TIMER** repeatedly until "⏲OFF" appears on the display. To restore the timer standby mode, press **TIMER** once or twice to display ⏲ or ⏲REC.

**Using the unit while the timer is set**
You can use the unit normally after setting the timer. Before turning off the power, repeat step 5 to prepare the source, and adjust the volume and tone.

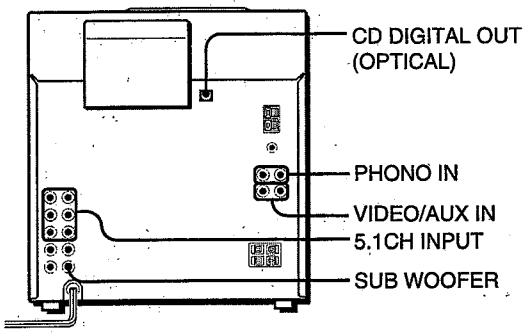
**NOTE**
- Timer playback and timer recording will not begin unless the power is turned off.
- Connected equipment cannot be turned on and off by the built-in timer of this unit. Use an external timer.
- During operation, ◄◄ and ►► are also available instead of **MULTI JOG**.
- During operation, **▮▮SET** is also available instead of **ENTER**.

## TIMER RECORDING

Timer recording is applicable for TUNER and VIDEO/AUX (with an external timer) sources only.

**Press TIMER repeatedly until ⏲ REC appears on the display, then press ENTER within 6 seconds.**
Carry out the steps of "SETTING THE TIMER" from step 2 and insert the tape to be recorded on into Deck 2 after step 5.

# CONNECTING OPTIONAL EQUIPMENT




Refer to the operating instructions of the connected equipment for details.

- The connecting cords are not supplied. Obtain the necessary connecting cords.
- Consult your local Aiwa dealer for optional equipment.

## VIDEO/AUX IN JACKS

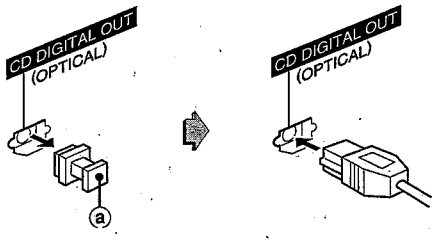
This unit can input analogue sound signals through these jacks. Use a cable with RCA phono plugs to connect audio equipment (DVD player, LD player, VCR, TV, etc.)
Connect the red plug to **VIDEO/AUX R** jack, and the white plug to **VIDEO/AUX L** jack.

## PHONO IN JACKS

Connect a turntable. Use an Aiwa turntable equipped with a built-in equalizer amplifier.

## CD DIGITAL OUT (OPTICAL) JACK

This unit can output CD digital sound signals through this jack. Use an optical cable to connect digital audio equipment (DAT deck, MD recorder, etc.)
Remove the dust cap ⓐ from **CD DIGITAL OUT (OPTICAL)** jack, then connect an optical cable plug to **CD DIGITAL OUT (OPTICAL)** jack.




**When CD DIGITAL OUT (OPTICAL) jack is not being used**
Attach the supplied dust cap.

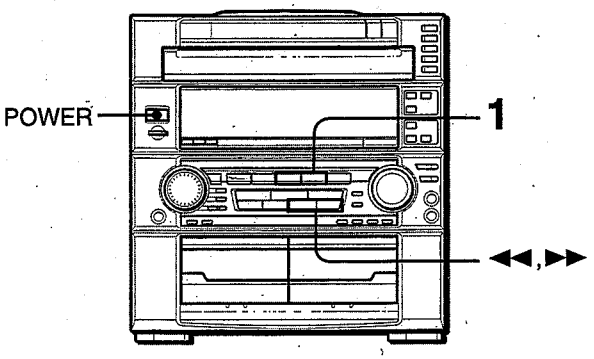
## SUB WOOFER JACK

Connect an optional powered sub woofer with a built-in amplifier to the jack.

## 5.1 CH INPUT JACKS

This unit can input sound signals from the audio equipment (DVD player, LD player, etc.) that contains a Dolby Digital decoder with the 5.1 ch output terminals.
Refer to "CONNECTING A DVD PLAYER" on page 32.

# LISTENING TO EXTERNAL SOURCES




To play equipment connected to the **PHONO IN** or **VIDEO/AUX IN** jacks, proceed as follows.

**1 Press PHONO or VIDEO/AUX.**
"PHONO" or "VIDEO" appears on the display.

**2 Play the connected equipment.**

**To change a source name on the display**
When **VIDEO/AUX** is pressed, "VIDEO" is displayed initially. It can be changed to "AUX" or "TV".
With the power on, press **POWER** while pressing **VIDEO/AUX**. Repeat the procedure to select one of the names.

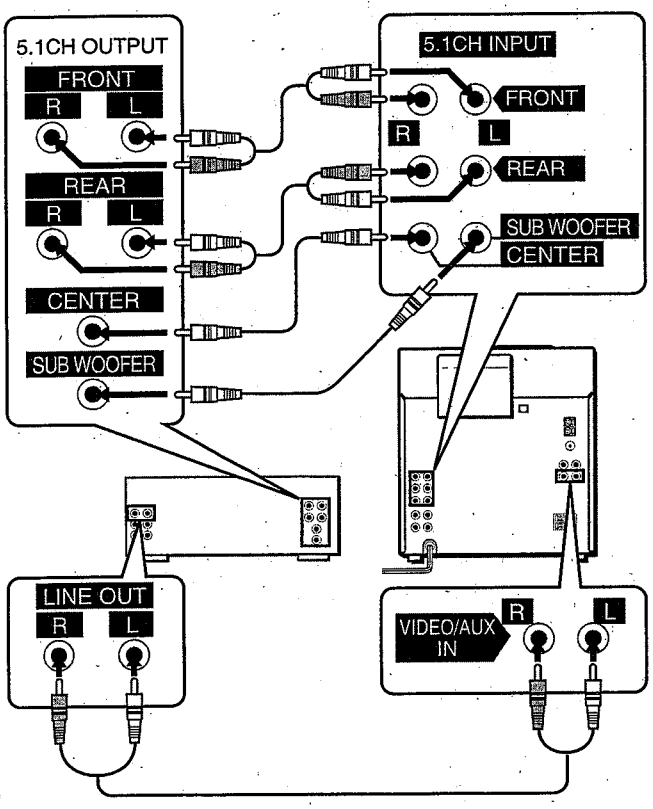
**To adjust the sound level of equipment connected to the VIDEO/AUX IN jacks**
When the sound level of the external source is much higher or much lower than that of other function sources, adjust it as follows.
1 Press **VIDEO/AUX** and play the equipment.
2 Press ◄◄ or ►► until the sound level becomes the same as that of other function sources.

**NOTE**
During recording, the sound level can not be adjusted.

# CONNECTING A DVD PLAYER

**5.1CH INPUT** jack of this unit support the DOLBY DIGITAL SURROUND system.
Connect a DVD player with 5.1 ch output jacks to this unit using cables with RCA phono plugs as follows;

| DVD player's jack | This unit's jack |
|---|---|
| 5.1CH OUTPUT FRONT (L, R), etc. | 5.1CH INPUT FRONT (L, R) |
| 5.1CH OUTPUT REAR (L, R), etc. | 5.1CH INPUT REAR (L, R) |
| 5.1CH OUTPUT CENTER, etc. | 5.1CH INPUT CENTER |
| 5.1CH OUTPUT SUB WOOFER, etc. | 5.1CH INPUT SUB WOOFER |
| LINE OUT (L, R), etc. | VIDEO/AUX IN (L, R) (See **NOTE**.) |



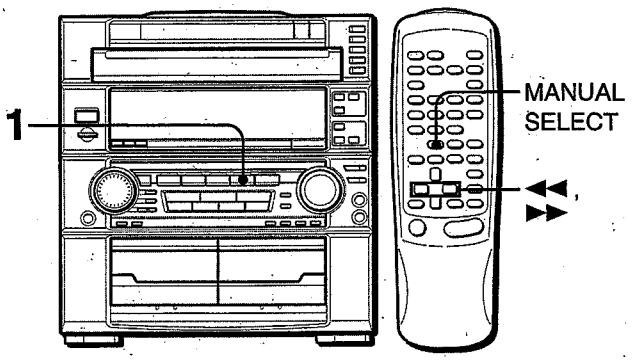

**NOTE**

- If the DVD player is not connected to **VIDEO/AUX IN** jacks:
  - the spectrum analyzer does not show the sound level of the DVD player.
  - the sound from the connected DVD player cannot be recorded.

  To remove these limitations, connect the LINE OUT jacks of the DVD player to **VIDEO/AUX IN** jacks of this unit besides connecting to **5.1 CH INPUT** jacks. The signals through **VIDEO/AUX IN** jacks enable the spectrum analyzer to work and the recording to be done.
- DOLBY DIGITAL SURROUND sound cannot be recorded in any way.

## LISTENING TO DOLBY DIGITAL SURROUND SOUND

When a DVD player is connected to **5.1CH INPUT** jacks of this unit, you can listen to DOLBY DIGITAL SURROUND sound, which enables you to enjoy theater-quality sound in your home.




***1* Press VIDEO/AUX 5.1 CH repeatedly until "5.1ch IN" is displayed.**

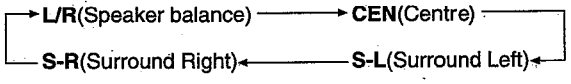
***2* Start playing DOLBY DIGITAL SURROUND sound on the DVD player.**

**NOTE**

- The DOLBY PRO LOGIC, the BBE and the DSP SURROUND system are automatically cancelled when the 5.1CH is selected.
- Make sure the software played back with the connected equipment support the DOLBY DIGITAL SURROUND.
- The function is changed from the 5.1CH to the VIDEO when:
  - the headphones are plugged in.
  - the DSP SURROUND system, the DOLBY PRO LOGIC or the Karaoke function is turned on.
  - the MIC or ECHO level is changed.

**To adjust the sound levels of the centre and surround speakers in DOLBY DIGITAL SURROUND**

1 Press **VIDEO/AUX 5.1CH** repeatedly until "5.1ch IN" is displayed.
2 Press **MANUAL SELECT (TEST)** on the remote control repeatedly.
Speaker names appear in turn as follows:




3 Press ◀◀ or ▶▶ to adjust the sound level while "CEN", "S-L" or "S-R" is displayed.
Each level can be adjusted between -8 dB and +7 dB.
4 Repeat steps 2 and 3 to adjust each speaker's sound level.

**NOTE**

If the surround speakers or the centre speaker level of the DOLBY DIGITAL SURROUND is changed, that of the DSP SURROUND system (page 10) and the DOLBY PRO LOGIC (page 27) is also changed.

# CARE AND MAINTENANCE

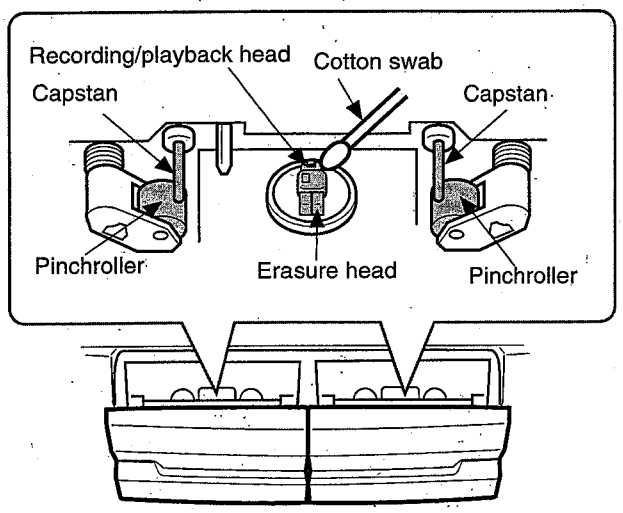
Occasional care and maintenance of the unit and the software are needed to optimize the performance of your unit.

### To clean the cabinet

Use a soft dry cloth.
If the surfaces are extremely dirty, use a soft cloth lightly moistened with mild detergent solution. Do not use strong solvents, such as alcohol, benzine or thinner as these could damage the finish of the unit.

### To clean the heads and tape paths

After every 10 hours of use, clean the heads and tape paths with a head cleaning cassette or cotton swab moistened with cleaning fluid or denatured alcohol. (These cleaning kits are commercially available.)
When cleaning with a cotton swab, wipe the recording/playback head, erasure head (Deck 2 only), capstans, and pinchrollers.



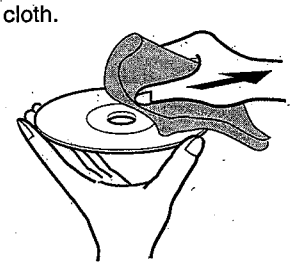

After cleaning the heads and tape paths with a liquid head cleaning cassette or a moistened swab, wait until the cleaned parts are completely dry before inserting the tapes.

### To demagnetize the heads

The heads may become magnetized after long-term use. This may narrow the output range of recorded tapes and increase noise. After 20- to 30-hour use, demagnetize the heads with any commercially available demagnetizer.

### Care of discs

- When a disc becomes dirty, wipe the disc from the centre out with a cleaning cloth.



- After playing a disc, store the disc in its case. Do not leave the disc in places that are hot or humid.

### Care of tapes

- Store tapes in their cases after use.
- Do not leave tapes near magnets, motors, television sets, or any source of magnetism. This will downgrade the sound quality and cause noise.
- Do not expose tapes to direct sunlight, or leave them in a car parked in direct sunlight.

# TROUBLESHOOTING GUIDE

If the unit fails to perform as described in these Operating Instructions, check the following guide.

**GENERAL**

**There is no sound.**
- Is the AC cord connected properly?
- Is there a bad connection? (→ pages 5,6)
- There may be a short circuit in the speaker terminals.
  → Disconnect the AC cord, then correct the speaker connections.
- Was an incorrect function button pressed?

**Sound is emitted from one speaker only.**
- Is the other speaker disconnected?

**The output sound is not stereo.**
- Is the Karaoke function turned on? (→ page 25)

**An erroneous display or a malfunction occurs.**
→ Reset the unit as stated below.

**TUNER SECTION**

**There is constant, wave-like static.**
- Is the antenna connected properly? (→ page 6)
- Is the signal weak?
  → Connect an outdoor antenna.

**The reception contains noise interferences or the sound is distorted.**
- Is the system picking up external noise or multipath distortion?
  → Change the orientation of the antenna.
  → Move the unit away from other electrical appliances.

**CASSETTE DECK SECTION**

**The tape does not run.**
- Is Deck 2 in pause mode? (→ page 15)

**The sound is off-balance or not adequately high.**
- Is the playback head dirty? (→ page 33)

**Recording is not possible.**
- Is the erasure prevention tab on the tape broken off? (→ page 16)
- Is the recording head dirty? (→ page 33)

**Erasure is not possible.**
- Is the erasure head dirty? (→ page 33)
- Is a metal tape being used?

**High frequency sound is not emitted.**
- Is a tape recorded without Dolby NR played back with the Dolby NR system operating? (→ page 15)
- Is the playback head dirty? (→ page 33)

**CD PLAYER SECTION**

**The CD player does not play.**
- Is the disc correctly placed? (→ page 17)
- Is the disc dirty? (→ page 33)
- Is the lens affected by condensation?
  → Wait approximately one hour and try again.

### To reset

If an unusual condition occurs in the display window or the cassette decks, reset the unit as follows.

1 Press **POWER** to turn off the power.
2 Press **POWER** to turn the power back on while pressing **■CLEAR**. Everything stored in memory after purchase is cancelled.

If the power cannot be turned off in step 1 because of a malfunction, reset by disconnecting the AC cord, and connect it again. Then carry out step 2.

# SPECIFICATIONS

## Main unit CX-ZVR80/88

### FM tuner section

| | |
|---|---|
| **Tuning range** | 87.5 MHz to 108 MHz |
| **Usable sensitivity (IHF)** | 13.2 dBf |
| **Antenna terminals** | 75 ohms (unbalanced) |

### MW tuner section

| | |
|---|---|
| **Tuning range** | 531 kHz to 1602 kHz (9 kHz step)<br>530 kHz to 1710 kHz (10 kHz step) |
| **Usable sensitivity** | 350 µV/m |
| **Antenna** | Loop antenna |

### LW tuner section

| | |
|---|---|
| **Tuning range** | 144 kHz to 290 kHz |
| **Usable sensitivity** | 1400 µV/m |
| **Antenna** | Loop antenna |

### Amplifier section

| | |
|---|---|
| **Power output** | **Front**<br>Rated: 80 W + 80 W<br>(6 ohms, T.H.D. 1 %, 1 kHz)<br>Reference: 100 W + 100 W<br>(6 ohms, T.H.D. 10 %, 1 kHz)<br>DIN MUSIC POWER:<br>170 W + 170 W<br>**Rear** (Surround)<br>Rated: 30 W + 30 W<br>(16 ohms, T.H.D. 1 %, 1 kHz)<br>Reference: 38 W + 38 W<br>(16 ohms, T.H.D. 10 %, 1 kHz)<br>DIN MUSIC POWER:<br>80 W + 80 W<br>**Centre**<br>Rated: 30 W<br>(8 ohms, T.H.D. 1 %, 1 kHz)<br>Reference: 38 W<br>(8 ohms, T.H.D. 10 %, 1 kHz)<br>DIN MUSIC POWER: 80 W |
| **Total harmonic distortion** | 0.15 % (40 W, 1 kHz, 6 ohms) |
| **Inputs** | VIDEO/AUX IN: 210 mV (adjustable)<br>PHONO IN: 340 mV (47 kohms)<br>MIC 1, MIC 2: 1.4 mV (20 kohms)<br>5.1CH INPUT:<br>FRONT: 500 mV<br>REAR: 300 mV<br>CENTER: 300 mV<br>SUB WOOFER: 500 mV |
| **Outputs** | CD DIGITAL OUT (OPTICAL)<br>SUB WOOFER: 1 V<br>SPEAKERS: accept speakers of 6 ohms or more<br>SURROUND SPEAKERS: accept speakers of 8 -16 ohms or more<br>CENTER SPEAKER: accept speakers of 8 ohms or more<br>PHONES (stereo jack): accepts headphones of 32 ohms or more |

### Cassette deck section

| | |
|---|---|
| **Track format** | 4 tracks, 2 channels stereo |
| **Frequency response** | $CrO_2$ tape: 50 Hz – 16000 Hz<br>Normal tape: 50 Hz – 15000 Hz |
| **Signal-to-noise ratio** | 60 dB (Dolby B NR ON, $CrO_2$ tape peak level, above 400 Hz) |
| **Recording system** | AC bias |
| **Heads** | Deck 1: Playback head × 1<br>Deck 2: Recording/playback/erase head × 1 |

### Compact disc player section

| | |
|---|---|
| **Laser** | Semiconductor laser ($\lambda$ = 780 nm) |
| **D-A converter** | 1 bit dual |
| **Signal-to-noise ratio** | 85 dB (1 kHz, 0 dB) |
| **Harmonic distortion** | 0.03 % (1 kHz, 0 dB) |
| **Wow and flutter** | Unmeasurable |

### General

| | |
|---|---|
| **Power requirements** | 230 V AC, 50 Hz |
| **Power consumption** | 220 W |
| **Dimensions of main unit (W × H × D)** | 360 × 394.5 × 382.5 mm |
| **Weight of main unit** | 11.7 kg |

## Speaker system SX-ZR80

| | |
|---|---|
| **Cabinet type** | 3 way, bass reflex (magnetic shielded type) |
| **Speakers** | Woofer: 220 mm cone type<br>Tweeter: 60 mm cone type<br>Super tweeter: 20 mm ceramic type |
| **Impedance** | 6 ohms |
| **Output sound pressure level** | 89 dB/W/m |
| **Dimensions (W × H × D)** | 280 × 444 × 272 mm |
| **Weight** | 4.5 kg |

## Speaker system SX-WZR88

| | |
|---|---|
| **Cabinet type** | 4 way, built-in sub woofer |
| **Speakers** | Sub woofer: 240 mm cone type<br>Woofer: 140 mm cone type<br>Tweeter: 60 mm cone type<br>Super tweeter: 20 mm ceramic type |
| **Impedance** | 6 ohms |
| **Output sound pressure level** | 89 dB/W/m |
| **Dimensions (W × H × D)** | 300 × 500 × 385 mm |
| **Weight** | 10.0 kg |

Specifications and external appearance are subject to change without notice.

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### COPYRIGHT
Please check the laws on copyright relating to recordings from discs, radio or external tape for the country in which the machine is being used.

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### OBSERVERA
Så länge som apparaten är ansluten till nätet flyter en svag ström genom densamma, även då den är avstängd. Om man under en längre tid ej har för avsikt att använda den, drag då ur nätkabeln.

### BEMÆRK
Apparate er stadig forbundet med lysnettet, så længe stikket er tilsluttet til stikkontakten, selv om afbryteren er slået fra. Hvis apparatet ikke bruges i længere tid, skal netledningen trækkes ud.

En

Printed by: Schaltungsdienst Lange Berlin (Germany)